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PROSPECTS FOR THE WORLD SUGAR ECONOMY IN THE LIGHT OF THE URUGUAY ROUND AGREEMENTS

Report by the UNCTAD secretariat

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Prospects for the world sugar economy in the light of the Uruguay Round (UR) Agreements

List of Figures :

Figure 1	Percentage contribution to world sugar balance (percentage share 1991-1993)
Figure 2	Imports under quota
Figure 3	European Communities (EC) sugar prices
Figure 4	EC sugar price - ECU (100 kg)
Figure 5	Comparison of the UR effects on the tariffs reduction for raw sugar (on the basis of 45 countries)
Figure 6	Comparison of the UR effects on the tariffs reduction for white sugar (on the basis of 44 countries)
Figure 7	World per capita consumption of centrifugal sugar (1993)
Figure 8	Production, consumption and prices

List of Boxes and Tables

Boxes :

Box 1 US import quota system

Box 2 The UR and the EU sugar regime

Box 3 The US and the UR

Box 4 North American Free Trade Agreement (NAFTA)

Tables :

Table 1 Relative importance of GATT signatories in the World Sugar Market (Percent share by volume during 1990-1993)

Table 2 Imports by non-GATT members, 1990-1993 (Tonnes, raw sugar equivalent)

Table 3 Contribution of prospective WTO members to World Sugar Balance (Percent share by volume during 1990-1994)

Table 4 Sugar: Export subsidy commitments under the UR (thousand tonnes)

Table 5 EC tariff equivalents (ECU/Tonne)

Table 6 Tariffs for sugar (Ad valorem tariff equivalents)

Table 7 Health regulations

List of Annexes :

ANNEX I Summary of policies of major sugar exporters

ANNEX II Summary of policies of major sugar importers

ANNEX III Major actors, centrifugal sugar (percentage share)

ANNEX IV US sugar import quotas, 1994/1995 (Short tonnes raw value)

ANNEX V Exporters: Comparison between 1993-1995 and 2000/2004 ad valorem tariff for raw sugar

ANNEX VI Importers: Comparison between 1993-1995 and 2000/2004 ad valorem tariff for raw sugar

ANNEX VII Exporters: Comparison between 1993-1995 and 2000/2004 ad valorem tariff for white sugar

ANNEX VIII Importers: Comparison between 1993-1995 and 2000/2004 ad valorem tariff for white sugar

ANNEX IX Classification of developing countries and territories according to their bound rates for raw sugar

ANNEX X Commitments on current and/or minimum access (metric tonnes)

ANNEX XI Percentage of ACP sugar exports to the EC in 1993 (tonnes raw value)

ANNEX XII Share of sugar products in developing countries' total exports

ANNEX XIII Developing Country total net exports to the free market in 1992, 1993 (thousand metric tonnes raw value)

ANNEX XIV Free market net imports by selected developing countries in 1992, 1993 (thousand metric tonnes raw value)

CONTENTS

		Paragraphs
INTRODUCTION		1 - 4
SUMMARY AND CONCLUSIONS		5 - 13
Chapters		
I.	**BACKGROUND**	14 - 45
A.	Major actors in the sugar market	14 - 23
B.	Domestic protection policies of major actors	24 - 25
	1. United States of America	26 - 32
	2. European Communities	33 - 38
	3. China	39
	4. Indonesia	40
	5. Nigeria	41
	6. Côte d'Ivoire	42 - 43
	7. Japan	44 - 45
II.	**AGREEMENTS IN THE MARRAKESH FINAL ACT RELATED TO SUGAR**	46 - 89
A.	Agreement on Agriculture	46
	1. Export subsidies	47 - 50
	2. Market access provisions	51
	2.1 Removal of non-tariff import barriers	52 - 71
	2.2 Minimum access commitments	72 - 79
	2.3 Special safeguard provisions	80 - 81
	3. Domestic support	82 - 86
B.	Sanitary and Phytosanitary Measures	87 - 88
C.	Special and differential treatment for developing countries	89
III.	**COMMITMENTS AND THEIR IMPLICATIONS FOR THE INTERNATIONAL SUGAR ECONOMY**	90 - 110
A.	Effects on prices	90 - 95
B.	Income growth	96 - 98
C.	Effects on developing countries	99 - 109
D.	Other implications	110
IV.	**POLICY OPTIONS**	111 - 124
A.	Improvements in efficiency	113
B.	Better use of sugar cane and sugar beet by-products	114 - 119
C.	Adding value to sugar	120 - 123
D.	Improvement in the functioning of sugar markets	124
ANNEXES		
REFERENCES		

INTRODUCTION

1. Government intervention in a number of countries has played a significant role in raising their sugar production, at a cost far above the world price. This has aggravated imbalances between production and consumption, while depressing production by low-cost producers. It has also segmented many national markets from the world market, which until recently only covered about one fifth of world production. This intervention included barriers to access to markets in the form of tariffs, non-tariffs measures such as quotas, wider policies of support to domestic producers in many countries, and preferential arrangements which cover a significant portion of international trade.

2. The main national systems of protection and preferential access include:

- The domestic protection afforded by many countries, including the members of the European Communities (EC) and the United States, to domestic sugar producers against world market competition. As shown in Annexes I and II, major producing countries have generally protected domestic producers by increasing the prices paid to them to levels above international prices. Protectionist policies have also prevailed in a number of other countries, both developing and developed; examples are India, Indonesia, Nigeria, Morocco, Poland, and Sweden, and from mid-1994 on, also the Russian Federation.[1]

- Preferential agreements between African, the Caribbean and the Pacific (ACP) countries and the EC, Cuba and the Former Soviet Union (FSU), and the Caribbean producers and The United States. The open market alone had therefore to absorb fluctuations in demand and supply; thus price volatility was higher than in a market where the effects of, for example, a production shortfall could be distributed more equally among all the buyers on the market.

3. On 15 April 1994, the "Final Act Embodying the Results of the Uruguay Round (UR) of Multilateral Trade Negotiations" was signed at Marrakesh. The Agreement on Agriculture addressed the main causes of imbalance between sugar supply and demand, noted in paragraph 1 above. This step was important because, in its absence the recent changes towards market deregulation and liberalization in a number of sugar-producing developing countries, as well as any attempt to harmonize investment decisions among sugar producers with a view to achieving a better supply-demand balance, would have had little impact on the proper working of the sugar market.

4. This paper provides a first assessment of the implications of the UR results for international sugar trade, particularly as concerns developing countries.

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[1] The Russian Federation introduced a 20 per cent customs duty on white sugar imports to protect its own sugar industry and thus promote domestic production.

SUMMARY AND CONCLUSIONS

5. The UR agreement makes a start with addressing the market distortions created by domestic policies of protection in the major producing countries. Nevertheless, it will have only limited impact on world sugar markets in the short term, as these protection policies remained almost untouched. However, the overall result of the UR will be to bring international trade in sugar, as well as further negotiations in this area, into the mainstream of the World Trade Organization (WTO) multilateral trading system.

6. Under the Marrakesh agreement, direct export subsidies will be reduced, tariffs will replace other restrictive border measures and will be bound and reduced as provided for in the individual country schedules, and domestic support measures will be governed by international rules and commitments.

7. The export subsidy reduction commitments undertaken on sugar imply that the total volume of exports of sugar, in respect of which direct export subsidies may be granted, will be reduced from a base period level of almost 7.2 million tonnes in the second half of the 1980s to 5.7 millions tonnes in 2000, or by 20.8 per cent, leading to more transparency and possible export cut-backs. However, 5.7 millions tonnes is still equal to about 19 per cent of world exports of centrifugal sugar in 1994.

8. Among the UR measures which will free world trade in sugar, one of the most important ones is the replacement of non-tariff barriers by tariffs as the only possible border measure and their binding and simultaneous reduction. Nevertheless, the tariff barriers which will remain in place when all the reforms are implemented will still be serious constraints on trade, taking into account domestic and international prices for sugar. In many instances, the size of the tariffs will be higher than the value of the sugar, leaving abundant room for further reductions. World raw sugar prices were around US 12 cts/lb in 1994; by 2000, the United States tariff rate for over quota raw sugar imports will be still over US 15 cts/lb, the tariff on raw sugar imports into the EC will be about US 18 cts/lb, and the Japanese tariff on raw sugar will be around US 29 cts/lb by 2000.

9. Forty-one developing and least developed countries (LDCs) consolidated tariffs for sugar at a maximum rate and in all cases this maximum bound rate, is higher than rates applied up to 1995. The result of the process of tariffication is an increase in average on ad valorem tariffs equivalents, for both raw and white sugar between the real applied tariffs in 1993 and the legal maximum for 1995. By the year 2000 (2004) however, there will be a reduction of tariffs in comparison with the base period. The positive impact of tariffication and tariff reduction provisions could be mitigated by the import safeguard provisions, which will allow additional duties to be charged, when certain trigger prices and trigger volumes are reached.

10. The largest impact of the UR agreement on the world sugar market is likely to come from an increase in demand resulting from the higher incomes brought on by trade liberalization.

11. Sugar trade liberalization will lead to increases in world market prices of sugar, while in many countries, domestic prices will decline to the benefit of consumers. The size of the

price increase is small as per the results from all preliminary models, and even in the most optimistic scenario of all, the impact on world prices will be moderated by the supply response in exporting countries.

12. Producing countries will be exposed more to market forces which in turn will require more efficiency both in the production process and in marketing. Sugar producing developing countries which depend on sugar as a main source of export revenues will evidently benefit because they have, until now, been confronted with competition from subsidized beet production. Among major developing country exporters, it is clear that the low-cost sugar producers will tend to benefit most.

13. Trade liberalization has potential negative effects for net sugar-importing developing countries which would evidently suffer any sugar price increases resulting from trade liberalization which increase the cost of their imports. Those developing countries which enjoy preferential access to the markets of the United States and the EC are also likely to face a reduction in their preferential margin.

Chapter I

BACKGROUND

A. Major actors in the sugar market

14. Sugar is produced under a wide range of climatic conditions in some 120 countries or territories, with sugar beet grown in temperate regions and sugar cane grown in tropical and sub-tropical regions. Sugar cane accounts for approximately 60 per cent of total production of centrifugal sugar (which accounts for virtually all of international sugar trade).

15. In Annex III the changes in shares of world production during the 1980s are shown. Developing countries as a group increased their share in world production from 55 to 59 per cent, primarily as a result of a substantial increase in centrifugal sugar production in China, India, and Thailand. As can be seen in the same Annex, the fastest growth in consumption in the 1980s was also in the Asian region, at an annual rate of 5.4 per cent. Asia accounted for virtually 70 per cent of the net growth in world consumption. At the same time, consumption in developed countries declined by one million metric tonnes due largely to increasing demand for low-calorie sugar substitutes.

16. The sugar market is also characterised by a large number of participants, with most countries being active as either exporter or importer, or both. Developing countries accounted during 1990-1993 for more than half of total sugar exports (60 per cent) and imports (57 per cent) of about 28 million tonnes total sugar imports. Because of this, the distinction in the commitments in the UR Agreement between developed and developing countries is relevant in the case of the sugar market.

17. As can be seen in Annex III, the shares of Cuba and the EC in world sugar exports decreased respectively from 28 to 25 per cent and 15 to 13 per cent, during the 1980s. In the case of Thailand, its share grew dramatically during the same period, from 7 per cent to 15 per cent. Brazil's share declined during the period, from 10 to 9 percent, partly reflecting its increased domestic use of sugar cane for ethanol production.

18. With regard to world imports (see Annex III), the share of the three major importers (FSU, United States and Japan) declined from 45 per cent to just over 30 per cent during the 1980s.

19. Developing countries as a group increased their share in world imports in the same period, from 44 to 57 per cent. At an individual country level, sugar imports have been erratic, depending on the availability of domestic supplies. China, India and Mexico were major net importers in certain years. Although China has pursued a determined policy of self-sufficiency, consumption nevertheless increased quickly, preventing the production-stimulating policy from reaching its targets. In an attempt to reduce its dependency on the world market, China has acquired the technology to produce High Fructuose Corn Syrup (HFCS) and saccharin, but this has not been sufficient to remove it from the list of major importers. In India, production of centrifugal sugar has closely followed the trend of consumption. Sporadically, however, supply and demand are unbalanced, which forces India to be a major player on the world market.

20. As can be seen in table 1, most of the trade in sugar (both raw and refined) and in molasses occurs between countries that were signatories to GATT in December 1994. The 87 countries that were contracting parties to GATT then accounted for about 72 per cent of world sugar consumption; 85 per cent of sugar production; 94 per cent of world sugar exports; and 58 per cent of world sugar imports. Among the major exporters only the Ukraine did not become a signatory to GATT. Among the major importers Algeria, Islamic Republic of Iran, the Russian Federation and China (a swing importer/exporter) were non-signatories.

Table 1

RELATIVE IMPORTANCE OF GATT SIGNATORIES IN THE WORLD SUGAR MARKET, 1990-1993

(Percent share by volume)

	GATT Members December 1994			Non-GATT Members
	Total	Developed	Developing	Developing
Production	85 %	26 %	59 %	15 %
Consumption	72 %	25 %	47 %	28 %
Exports	94 %	30 %	64 %	6 %
Imports	58 %	27 %	31 %	42 %
Stocks	83 %	42 %	41 %	17 %

Sources : International Sugar Organisation, Sugar Year Book 1993; GATT, TNC/FA 15 April 1994.

21. Non-GATT members account for only 6 per cent of world exports, but for over 40 per cent of world imports. The fact that UR commitments give special treatment to the 48 least developed countries will not have a significant impact on the sugar market, as this group of countries accounts for only 7 per cent of consumption, 5 per cent of production, 13 per cent of imports and 3 per cent of exports (1990-93 shares).

Table 2

IMPORTS BY NON-GATT MEMBERS, 1990-1993
(Tonnes, raw sugar equivalent)

Countries	1990	1991	1992	1993
Belarus	149,000	119,000	222,557	299,113
Bulgaria	238,000	107,176	200,490	220,949
China	1,147,188	1,017,737	1,103,400	453,816
Islamic Rep. of Iran	606,000	685,000	736,200	500,000
Iraq	480,000	174,700	438,750	330,000
Jordan	372,000	191,317	472,000	317,000
Korea D R	120,000	120,000	125,000	125,000
Kazakhstan	300,000	137,000	505,900	352,429
Lebanon	110,000	155,000	93,000	102,000
Libyan Arab Jamah.	229,000	161,000	154,000	188,000
Russian Federation	3,432,000	1,640,000	5,143,705	5,428,447
Saudi Arabia	479,600	471,100	521,000	489,900
Syrian Arab Rep.	363,000	422,500	372,000	263,000
Uzbekistan	0	0	436,900	504,000
Yemen	260,000	278,600	369,700	310,000
Total	8,285,788	5,680,130	10,894,602	9,883,654
World	27,622,387	26,283,685	30,867,940	29,213,539
Total as % world	30%	22%	35%	34%

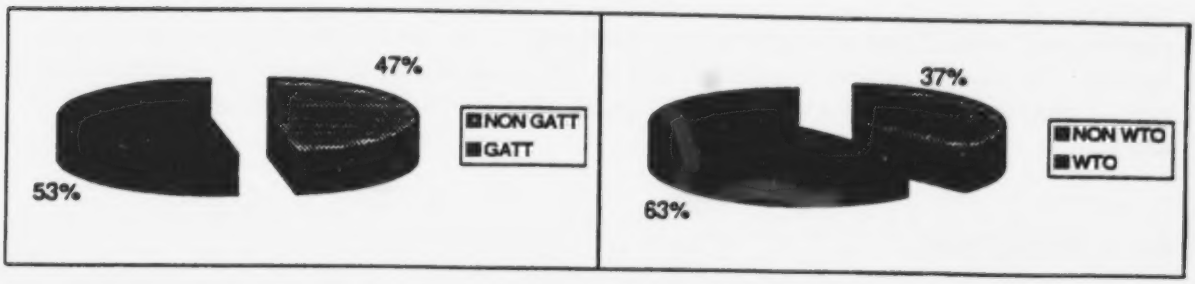
Source : International Sugar Organisation, Sugar Year Book 1993, GATT TNC/FA, 15 April 1994.

22. The Marrakesh Agreement was signed by 144 countries, i.e. by more countries than the GATT Agreement. However, at the time of publishing this paper (July 1996), only 121 countries had completed the necessary requirements to become members of the WTO.[2] They accounted for 77 percent of world consumption, 86 per cent of production, 63 per cent of imports and 89 per cent of exports (1991-1994).

[2] World Trade Organization, WT/L/113/Rev.2, 29 April 1996.

Figure 1

PERCENTAGE CONTRIBUTION TO WORLD BALANCE
(percentage share 1991 - 1994)



23. From these, 4 are in process of access and 16 are GATT members but did not become WTO members. All these countries are LDCs, or developing countries. These countries are largely importers from the world market, accounting for 12 per cent of total sugar imports; however, even together, they do not play a significant role in the sugar market.

Table 3

CONTRIBUTION OF WTO MEMBERS TO WORLD SUGAR BALANCE
(Percent share by volume during 1991-1994)

	WTO Members	OF WHICH				Non WTO Members
		Developed	Developing	Less Developed	Economies in transition	
Imports	63	26	22	12	3	37
Exports	89	32	56	1	0	15
Production	86	29	53	1	3	14
Consumption	77	28	46	1	2	23
Stocks	80	46	29	1	4	20

Source : International Sugar Organization, Sugar yearbook 1994

B. Domestic protection policies of major actors

24. Most sugar producing countries protect their sugar sectors, keeping foreign sugar expensive, and subsidizing, in one way or another, exports. Without such protection, in a free trade environment, the world sugar economy would be much different from what it is today with production costs determining the pattern of sugar production and trade.

25. In the period 1987/88 to 1992/92, the average production costs (fixed costs included) of major producers such as China, EC and FSU were more than twice the world market price; and not a single country had production costs which were lower than the world market price. Most of the major exporters had production costs that were 30 to 80 per cent above the then current world market prices. It should therefore come as no surprise that only very few of the larger countries in the sugar economy (namely Australia, Canada and Singapore) let their sugar producers and refiners operate in a liberalized environment. All other countries operate combinations of tariff and non-tariff barriers and domestic support systems to protect their sugar sectors. The policies of several countries will be discussed below, to give an indication of the type of protection policies pursued; information on other countries is summarized in Annexes I and II.

1. United States

26. Protection of sugar producers dates back to 1934. Since 1977, this protection has been implemented through an internal price support system operated by the Commodity Credit Corporation (CCC) Loan Programme. This is a system of loans to processors which is meant to support prices should these fall below certain predetermined levels. To obtain these preferential loans, processors must pay growers minimum prices, which are established annually for each region, and undertake to bear storage costs.

27. The Government establishes a loan rate for raw sugar which also serves to determine the loan rate for refined sugar. The Food Security Act of 1985 specifies the minimum national non-recourse loan rate for sugar cane at 18 cents a pound for raw cane sugar. The rate for beet sugar runs about 3 cents above the loan level for sugar cane.

28. Sugar is used as a collateral and processors can choose between:

- Repaying their loans to CCC, plus interest at a rate which is generally lower than that prevailing on financial markets;
- Forfeiting their sugar to the CCC: in this case they do not have to pay interest, but sugar passes into CCC's hands.

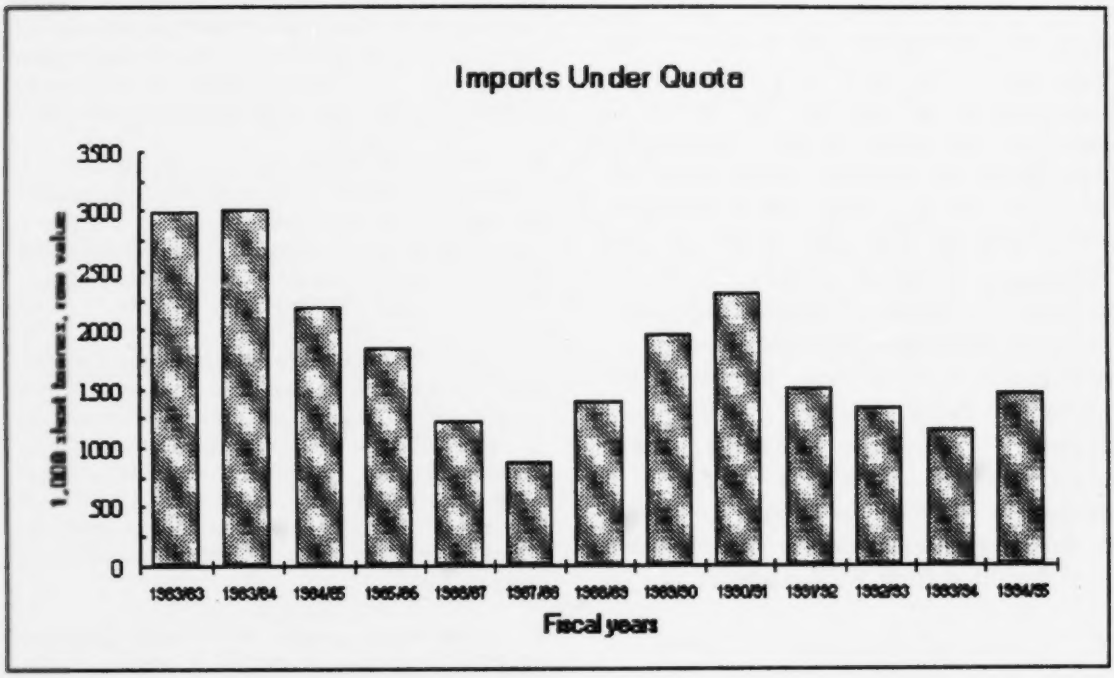
29. With the fluctuation of world market prices, much sugar was forfeited when prices were very depressed (for example, in early 1982). To minimize this risk, the Market Stabilization Price (MSP), a sort of target price, was introduced by the Government (in a 1981 Bill). The MSP represents a price for raw sugar at which commercial sales would be more profitable than forfeitures and therefore is deliberately set above the loan rate.

30. The only available tool to achieve the MSP is control over supply. USDA estimates domestic sugar demand and then uses a restrictive import quota to control the global supply. Under this quota, sugar enters the United States duty free under the Generalized System of Preferences and for Caribbean Countries, or at a duty rate of 0.625 cents per pound from selected

countries to which shares of the global quota are allocated[3] (For more information, see box 1 about United States quotas). Without the quotas, uncontrolled quantities of sugar would enter the United States market and domestic prices would fall below the MSP. Sugar processors would then forfeit their stocks to the CCC rather than sell them at a lower price on the market.

31. However, imports can not be reduced below the global quota set by law, which is 1.25 million short tonnes; this was why the Farm Act gave the Government an additional instrument, that is the possibility to restrict domestic production by imposing marketing allotments. A

Figure 2



marketing allotment determines the quantity that can be sold by an individual enterprise in the United States domestic market at the first processing level. Producers must themselves find an outlet for surplus production (in 1992 some 300 to 400 thousand metric tonnes), outside of the United States market.

32. As the support for sugar producers takes the form of an enforced minimum market price, most of the cost of producer support has to be borne by consumers. The estimated cost to American consumers is US$ 1.4 billion a year.[4] At the same time HFCS consumption has

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[3] The Generalized System of Preferences (GSP), introduced in 1974 expired on 30th September 1995, and its renewal depends on the current debate on the new farm bill. In the season 1994/1995, 32 countries profited from the GSP, namely Barbados, El Salvador, Peru, Zimbabwe, Dominican Rep., Honduras, Uruguay, Costa Rica, Haiti, Guatemala, Congo, Fiji, Jamaica, Mexico, Ivory Cost, Papua New Guinea, St. Kitts & Nevis, Argentina, Malawi, Taiwan Province of China, Trinidad & Tobago, Bolivia, Mauritius, India, Belize, Colombia, Mozambique, Philippines, Costa Rica, Ecuador, Swaziland and Thailand.

[4] Reuter, 17 May 1993.

expanded behind the shield of high domestic sugar prices.[5] As of mid-1995, United States Congress will be debating a new farm bill which would set farm programmes for the next five years, including United States sugar policy.

2. European Communities

33. The EC support policy has been based on intervention prices set for raw sugar and white sugar. (In Figure 3 the determination of official EC prices is shown). At these prices, intervention agencies in the Member States have the obligation to buy sugar from domestic producers within the limits of the so-called "A-quota", discussed below. Sugar produced in excess of internal EC needs (this happens because intervention prices are well above world prices), but below the "maximum quota" (the A and B quotas together - see below) receive export subsidies ("restitutions") to enable it to compete in world markets. A price similar to the intervention price is paid for raw sugar imported from ACP countries.

34. There are three kinds of quotas:

- The A quota (also called basic quota) is the production needed to match estimated domestic consumption. National quotas are set through negotiations, taking into account levels of self-sufficiency in each country. Governments allocate the A quota to processors who apportion it among growers in the form of contracts.

- The B quota is the quantity for which the EC is willing to pay export subsidies. A and B quotas make up the "maximum quota". The B quota was formerly a percentage of the A quota, and rates differed among European countries. This percentage used to be reviewed annually, but not necessarily changed. Now, both A and B quotas are set for

Box 1

United States import quota system

1. The Sugar Act expired in 1974 and was not replaced. Quotas were suspended during the period 1975-1981. In May 1982, import quotas were reintroduced, and fixed at 2.8 million metric tonnes. A forecast of domestic supply and demand leads from time to time to an adjustment of the quota in order to maintain market prices at about 3.5 cents per pound above the Market Stabilization Price. A global quota of 1,458,333 short tons of raw sugar was fixed in August 1994 (about 1,322,978 metric tonnes). In 1994/5, some 41 countries had a share of this quota (see annex IV).

2. Tariff-rate import quotas are allocated to countries based on the average of 1975-1981 imports (not counting the years with the highest and lowest imports), with a few countries getting a fixed 5,000 metric tonnes basic quota. They decreased sharply between 1982 and 1992 (see figure 2).

3. *The Caribbean Basin Initiative* was signed in August 1983 and provides trade incentives and duty-free status to Central American and Caribbean countries for 12 years. This measure has been important for the Dominican Republic, Guatemala and Panama which had not been eligible for the benefits of the GSP for the large part of their exports because they exceeded the United States import quota. Presently, 14 countries fall under the CBI.

4. The North America Free Trade Agreement (NAFTA) which became effective on January 1 1994, eliminated most trade barriers among the United States, Canada and Mexico. The USA-Mexico sugar provisions are reciprocal and will provide duty-free access for Mexican sugar exports under certain conditions. (for more information about NAFTA see box 3)

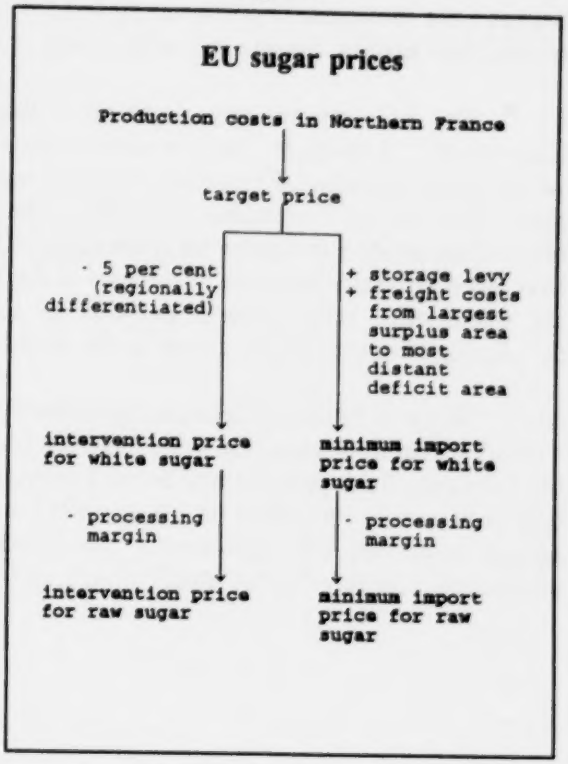
Source : UNCTAD, Secretarial Database.

[5] For more information about HFCS consumption in the United States, see The World Sugar Market, UNCTAD/COM/35, of 16 march 1994, page 9.

a five-year period; the B quota is a fixed quantity of 2.288 million metric tonnes. Any A and B sugar in excess of consumption is exported with export refunds. A and B quotas have last been reduced in 1981/82, by 1.76 per cent on average.

The C quota (or C sugar) is the production in excess of the maximum quota and is not directly covered by the price support system. There are no limitations on this production. However, except in times of shortage, C sugar may not be sold in the Member States. It has to be sold on the world market at the growers' risk. C sugar exports are large: in 1991/92, some 1.384 million metric tonnes of white sugar were exported without refund, as against 2,808 million metric tonnes with refund. Farmers produce C sugar for several reasons:

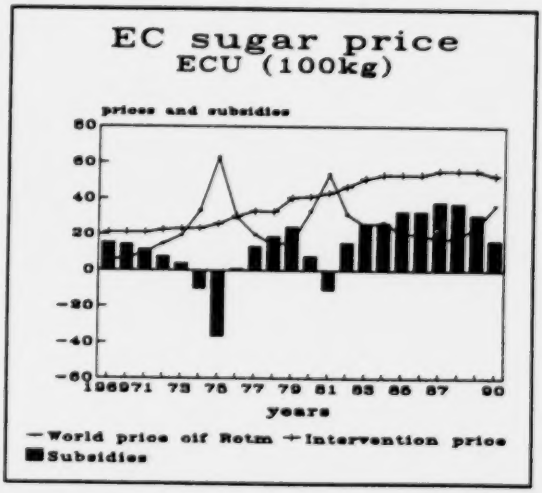
Figure 3


EU sugar prices
Production costs in Northern France
target price
- 5 per cent (regionally differentiated)
+ storage levy
+ freight costs from largest surplus area to most distant deficit area
intervention price for white sugar
minimum import price for white sugar
- processing margin
- processing margin
intervention price for raw sugar
minimum import price for raw sugar

- Farmers try to produce more than the allocated quotas to make sure that in the case of an unexpected production shortfall they would still meet their quota target. A factory's quota may be reduced if it does not fulfil it.
- If farmers expect world prices which are higher than the intervention price, they raise their production above the A and B quotas.

35. In most years, intervention prices are well above CIF world market prices (See Figure 4). As indicated, sugar produced in excess of internal European Communities needs, but below the maximum A and B quotas, receives export restitutions so as to be competitive with world market sugar. These subsidies, paid out of the guarantee section of the EC's Agricultural Guarantee and Guidance Fund (EAGGF), are based on the difference between the intervention price and the Cost Insurance and Freight (CIF) world market price. As a result, intervention agencies, in practice, purchase very little sugar.

Figure 4



36. With the system it had set up, the EC had been almost completely closed off from the world

market. Imports were taxed at the border by variable levies, which were equal to the difference between the minimum import price (threshold price) and the CIF price (world price). For this reason, free market imports had been absent in recent years.

37. The EC imports raw sugar from the ACP countries on the basis of the Lomé Convention.[6] Linked to the Convention are several protocols, including the sugar protocol, which grants preferential treatment for sugar exports (i.e. export of a fixed quota at a guaranteed price) from the ACP countries to the EC. The guaranteed price is determined annually on the basis of the intervention price for white sugar. The effects of the EC regime on the world market have been generally negative. Estimates of the long-term downward effect of the EC regime on the world price range from 5 per cent to 17 per cent and the foreign exchange costs to developing countries which export to the world market are clearly very substantial.

38. When in 1992 the Common Agricultural Policy (CAP) reform was decided, sugar was not a priority, mainly because the system did not lead to budget outlays. On the 10th of April 1995, the EC Council adopted the new Sugar Policy, to bring it into line with the UR agreement. The new policy came into effect on 1st July 1995 and will cover the six year implementation period agreed under the UR agreement. The fundamentals of the Sugar Policy have remained unchanged. (for information about the UR and the EC sugar regime, see box 2 below).

[6] In 1975, the first Lome Convention between the member States of the EU and 46 countries of ACP was concluded. The Lome Convention is renewable every five years. The most recent one is lome IV, signed in 1990.

Box 2

The Uruguay Round and the EC sugar regime

Under the UR agreement, the EC made commitments to reduce progressively the volume (-21%) of subsidized sugar exports by 2000, from the 1991-92 level of 1.617 to 1.277 millions tonnes -340.000 tonnes a year less than in the 1986-88 base period, and in its value by 36% to 497 millions ECU and to convert the variable import levy into a fixed tariff system. According to the 1995 Sugar Reform, these objectives will be achieved by means of cutting sugar production under quotas accordingly and equally for all producers in the different Member States, and by export and import licences. a/ Traders also are obliged to "prefix export refunds" on sugar. New provisions have also been decided as far as national aids in Italy and Spain and arrangements providing for imports of "special preferential" raw cane sugar (SPS) b/ are concerned. The ACP countries for their part have agreed to a formula to allocate, and where necessary reallocate, the quantities of SPS allotted to them.

Minimal changes have been brought in the sugar regime. This, though, has not come as a surprise. Price adjustment had been expected to be minimal until the year 2000 because of the import safeguard provisions. The application of the import safeguard for sugar in EC is seriously complicated by the lack of imports entering the market without special treatment (i.e. not under the Sugar Protocol or with reduced tariffs) which distorts the prices paid. As a result, the reference price proposed (ECU 531 per tonne) is based on the price for ACP imports at reduced tariffs. This is roughly double the world market price during the base period. Because of the artificially high reference price, very large additional duties will be chargeable at any plausible world price. Coupled with the tariff these additional duties would be sufficient to prevent any forced reduction in the current intervention price of ECU 631.9 per tonne as a result of the tariffication.

After the implementation period, there may be substantial pressure for price adjustment arising not only from the UR Agreement but also from the Common Agricultural Policy (CAP) reform and the implementation of the UR Agreement in other sectors; and these may shift the balance towards price adjustment over time. c/These factors could also result in some price reduction even where adjustment in the sugar sector was not directly required by the UR provisions, beneficial for the domestic consumer. Any reduction in the intervention price will have a negative effect on the Sugar Protocol price, of particular importance for ACP countries.

In general, the world raw and white sugar prices are expected to increase with reduction in EC subsidized exports. Simulation models differ in the quantity of the change. For example, the Australian Bureau of Agricultural and Resource Economics (SUGARBARE) world sugar model indicates that by 2000 the world raw sugar price would increase by 2.3% if subsidized exports are 340,000 tonnes/year less than in the 1986-88 base period d/. A Catholic Institute for International Relations(CIIR) occasional paper on the reform of the EC sugar regime considered that the world price might increase by only about 0.5% as a result of EC production reduction by about 2-300,000 tonnes within the current range of price projections e/. However, unsubsidized EC exports may increase, depending on the price relation between sugarbeets and other crops.

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a/ Some preliminary models has already suggested the need to quota reductions by around 4% (Tangermann(1994). The Agra Europe 1994 model suggested that to meet this commitment a combination of both a cut in quota production of about 2/4 per cent an a price reduction of 10 to 12 percent would be needed.

b/ The SPS mechanism (which is different from ACP preferential sugar imports under the Sugar Protocol of the Lome Convention) replaces the transitional agreements for Portugal and Finland and brings the raw sugar policy into a single framework. On the basis of the SPS, refining quotas will be filled by domestic raw sugar supplies, raw sugar imported under the Sugar Protocol and an agreement with India.

c/ GATT budgetary commitments in processed goods containing sugar may already force the Sugar division to contemplate sugar price cuts.

d/ Australian Bureau of Agricultural and Resource Economics (ABARE), International Sugar Organization, Workshop on the effect of UR on sugar, USDA May 1993.

e/ CIIR, Reform of the EC Sugar regime, September 1994.

3. China

39. China, the sixth largest sugar producer with 8 per cent of world production in 1993, became an exporter in 1991. Sugar trade was a monopoly of the China National Cereals, Oils and Foodstuffs import and Export Corporation (CEROIL) until 1992, when the Government stopped subsidizing sugar and the provinces gained an autonomous trading status. CEROIL imports directly through its purchasing operation in Peking for large scale orders such as with Cuba, or a large-sized export of white sugar to Russian Federation (Protocol supplies). It has also two marketing agencies in Hong Kong. Sugar cane prices are determined by the Government. The farmers have the obligation to sell to government-appointed sugar mills.

4. Indonesia

40. Indonesia, the world's second largest sugar producer and exporter in the 1930s, has become a major sugar importer, importing mainly from Thailand. The sugarcane is grown by small planters, state sugar mills and private plantations. The country has tried to become self-sufficient in sugar and in the long term, a sugar exporter; farmers are required to cultivate cane, at least for two consecutive seasons, and then, they can grow other crops for a period of normally two years. This measure has been taken in order to force planters to grow sugar because others crops, such as rice, corn which are more attractive, despite the subsidies given to the inputs of sugar production. On the other hand, the Government raised in April 1995 the farmers' sugar prices by almost 30 per cent in a bid to encourage sugar cane cultivation.

5. Nigeria

41. Nigeria is both a producer and a heavy importer of sugar. The current local production is centered in two parastatal plantations: The Nigerian Sugar Company (Bacita) and the Savannah Company. There are also two smaller medium-sized plantations, Sunti and La Fiagi. The Nigerian Government's aim is to develop the sugar industry through the following measures:

-guaranteed minimum prices for sugarcane
-subsidies for inputs, land preparation and haversting
-tax relief for investors in medium and large scale plants
-the yearly fixing of a local price as a function of local production costs and world market prices to ensure protection against world market imports.

6. Côte d'Ivoire

42. Côte d'Ivoire produces sugar in 4 sugar complexes owned and run by a government enterprise, Sodesucre, which is also responsible for marketing. There have been many restructurating programmes in order to improve the level of productivity. The latest restructurating plan was drawn up for 1991/92-1995/96. The aims are as follows:

-the introduction of village plantations

-improvement of factories
-improvement of management , including on a commercial basis
-a target production level of about 189 000 MT.

43. In order to keep its export quotas to the USA and the EC, Sodesucre avoids selling locally. This is motivated by the fact that prices in foreign currencies had doubled in value since the 50 per cent devaluation of the CFA (national currency) in January 1994.

7. Japan

44. Like others, Japan, the world's third larger sugar importer with 8 per cent of the world imports, and one of the largest consumer, with 12 per cent of world consumption, practices a protectionist policy. Beet sugar in the north and cane sugar in the south are being produced behind high tariff barriers.

45. The pricing policy in Japan has been established in order to ensure protection for its sugar and starch industry. Under this system, the Ministry of Agriculture, Foresting and Fishing set three reference prices every year: the maximum and the minimum stabilization prices and the objective or support price to the domestic industry, fixed at a level between these two spectoral prices. This is the price at which sugar must be sold on the internal market. Most of Japan's sugar imports are supplied by the main Sogoshoshas. These normally buy their sugar from unrelated refineries. All importers have quota. If they import more than this in times of a weak domestic sugar market, the Stabilization Agency can levy a tax on the extra amount they import, to cover the price stabilizing measures of the Agency. Through these measures, the sugar market is strictly controlled by the government.

Chapter II

AGREEMENTS IN THE MARRAKESH FINAL ACT RELATED TO SUGAR

A. Agreement on Agriculture

46. The Agreement on Agriculture provides the framework for the specific commitments made by Members to increase the access of agricultural products of other Members to their markets. The commitments cover four areas, namely export subsidies, market access, internal supports and, through a separate agreement, sanitary and phytosanitary measures. The implementation period for these commitments started on 1 January 1995. Developed countries will have six years to fulfil all their UR commitments (until the year 2000). Developing countries have four extra years until 2004.

1. Export subsidies

47. By the year 2000, developed countries are to reduce the quantity of subsidized sugar exports from the 1986-1990 base period by 21 percent and budgetary outlays for sugar export subsidies by 36 percent.[7] For developing countries, the reductions are 14 and 24 percent respectively, over the period 1995-2004.

48. Under the "flexibility" provision, countries may phase-in the export subsidy reductions for any commodity in equal annual increments in the second through to the fifth year of the implementation period, as long as the cumulative overruns do not exceed base period levels by 3 per cent for expenditures and 1.75 per cent for quantities of subsidized exports, and the final levels in the year 2000 reflect full compliance. Products that did not receive export subsidies in the 1986-90 period will not be eligible for export subsidies in the future.

49. The export subsidy reduction commitments on sugar undertaken by ten countries (namely, Brazil, Colombia, the Czech Republic, the European Community, Hungary, Mexico, Poland, Romania, the Slovak Republic and South Africa) will mean that the total volume of exports of sugar in respect of which direct export subsidies may be granted will be reduced from a base period level of almost 7.2 million tonnes to 5.7 millions tonnes in 2000, or by 20 per cent (see table 4). The commitments affect indeed a significant share of world trade and should lead to more transparency, as well as export and possibly production cut-backs. However, the remaining potential of subsidized sugar exports would still account for a significant share of world exports: export subsidies could still be given on a total of 6.6 millions tonnes in 1995, and 5.7 millions tonnes in 2000; this is equal to about 22 per cent and 19 per cent respectively of 1994 world exports of centrifugal sugar.[8]

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[7] Under the "front-loading" provisions 1991-1992 could be used as a base period if the quantity in that period was higher than in 1986-90.

[8] Some countries which are going through a process of deregulation in the sugar industry and that are not subsidizing their exports anymore, like Brazil and Mexico, may not at all use the export subsidy option.

50. The potential impact on the market of the 21 per cent reduction in the volume of subsidised exports, particularly that from South Africa and European Community,[9] would be an increase in prices; however, this may be dampened somewhat by a decline in world demand due to reduced availabilities of subsidized exports and increased exports by low-cost producers.

Table 4

SUGAR: EXPORT SUBSIDY COMMITMENTS UNDER THE UR
(raw sugar equivalents)

	Commitment base	1995	2000	2004	Reduction	
		Thousand tonnes				%
Brazil	1740	1716	1600	1500	240	14
Colombia	260	256	240	224	36	14
EC (1)	1617	1560	1277	1277	340	21
Hungary (1)	132	144	32	32	134	81
Mexico	1530	1500	1367	1260	270	18
Poland (1)	132.1	127.5	104.4	104.4	28	21
Romania	276	170	159	151	25	14
Slovak Rep.(1)	5	5	4	4	1	20
South Africa (1)	889	858	702	702	187	21
TOTAL	6581.1	6358.5	5485.4	5254.4	1261	20

Memo Item: World gross exports averages over the period 1990-92 about 28.7 million tonnes; since permitted export subsidies under Marakesh will total 6.6 million tonnes, such exports could account for about 23 per cent of world exports.
(1) Assuming no new commitments after 2000.
Sources: Marakesh Agreement - Country Schedules, Sugar Year Book 1994, International Sugar Organization.

2. Market access provisions

51. There are two elements to the commitments on **market access**: the removal of all non-tariffs import barriers and tariffs binding and reduction.

2.1. Removal of non-tariff import barriers

52. The removal of non-tariff import barriers is the most important component of the Agreement on market access and may be the single main provision leading to a worldwide adjustment of sugar policies. Existing non-tariffs barriers will be removed or could be tariffied. The switch to tariff equivalents is based on a common formula using data from 1986-88. The new tariffs in most cases were devised to match the difference between internal prices (a representative wholesale price) and external prices (average CIF unit values). All tariffs on sugar and sugar containing products will be bound by 1995 and reduced by rates which vary from country to country (and there will also be 24 cases of tariff quotas). Tariffs have certain advantages over other types of trade barriers since they are less trade distorting and provide better price transparency than non-tariff barriers.

53. The 15 developed countries in the UR Agreement have committed themselves to reducing existing tariffs (and the tariffs resulting from the tariffication process) on agricultural products by 36 per cent on average with a minimum tariff cut of 15 per cent for each tariff zone over the

[9] South Africa and the EU will reduce subsidized exports by 187,000 and 340,000 tonnes, respectively, below average levels for 1986-90. (For more information about the EC, see box 2).

period 1995-2000. For sugar, the minimum tariff reduction of 15 per cent was adopted by half of these countries, including Canada, Japan and the United States. Tariff reductions by the rest of the countries ranged from 20 per cent in EC, to 50 per cent in Australia and Iceland, to duty free access in New Zealand (See Annex V). The tariff reductions should lead to reduced prices for consumers and processors, which should increase import demand, depending on the initial level of the tariff (often the tariffication process has resulted in very high tariff rates), the extent of the reduction, as well as on the elasticity of demand for sugar.

54. With the exception of the least developed countries, the 68 developing countries that signed the GATT agreement up to December 1994, were given the possibility to reduce tariffs at a slower rate, by a simple average of 24 per cent with a minimum tariff cut of 10 per cent for each tariff line. They were also permitted to reduce their tariffs over a 10 year period from January 1995 to December 2004. Developing countries represent about 31 per cent of world sugar imports.

55. Tariff reductions were not sought from the least developed countries, 29 of whom were signatories. These are Angola, Bangladesh, Benin, Burkina Faso, Burundi, Central African Republic, Chad, Djibouti, Gambia, Guinea, Guinea Bissau, Haiti, Lesotho, Madagascar, Malawi, Maldives, Mali, Mauritania, Mozambique, Myanmar, Niger, Rwanda, Sierra Leone, Salomon Islands, Togo, United Republic of Tanzania, Togo, Uganda, Zaire and Zambia. The significance of this exemption is likely to be minimal since the share of world consumption and imports of all 47 least developed countries together is about 4 to 5 per cent.

56. Developing and less developed countries were also given the option to commit themselves to consolidate all the tariffs at a maximum rate from January 1995. As can be seen in Annex V to VIII, 41 developing and less developed countries consolidated tariffs for sugar at a maximum rate and in all cases this bound rate is higher than previous applied unbound rates.[10] As can be seen in Annex IX, 6 countries (15 per cent of the total of these 41 countries) retained maximum rates up to 30 per cent, 22 between 30 and 100 per cent, but the rest 27 per cent set high maximum rates of between 100 and 240 per cent.

57. A total of 48 countries reduced their tariffs for raw sugar, of them 8 countries will reduce their tariff by 10 per cent, 14 countries by 11 to 15 per cent, and the remaining between 16 and 70 per cent. New Zealand, Hong Kong and Macao will provide duty free access for raw sugar.

58. Sugar tariffs of major raw exporters and importers are shown in Annex V and VI. As concerns the exporters, Australia and Brazil have offered major reductions of 50 and 59 per cent respectively. For Australia, the specific tariff will be A$ 140 per tonne in 1995, declining to A$ 70 per tonne by the year 2000. In the case of Brazil, tariffs were bound at 85 per cent for 1995 and would be reduced to 35 per cent by the year 2004.

59. As concerns the major importers, Japan has agreed to reduce the current composite import charges on raw sugar (an import duty, a levy, a surcharge and an excise duty component) by 15 per cent, from the base level of Yen 84.50/kg in 1995 to Yen 71.80/kg (about US 29 cts/lb) by

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[10] These binding rates, however are only the legal maximum rates and will not necessarily be applied. Previous rates were unbound, offering no security for exporters.

2000. This tariff resulting from the tariffication process exceeds by 200 per cent the average world price in 1994.

60. Because of the high tariff and the heavily regulated nature of the domestic sugar market in Japan, it is not clear that the benefits of any reduction of duty will be transmitted to the consumers. The United States tariff for over-quota raw sugar imports will be reduced by 15 per cent to US $ 338.7/TM (US 15.36 cts/lb) by 2000 (For more information about the United States and the Uruguay Round, see box 3).

61. The EC variable levy for raw sugar was converted into a fixed rate tariff of 424 ECU/tonne, which will be reduced by 20 per cent; this means that the tariff would be ECU 339/tonne or about 18 US cts/lb by 2000. As can be seen in table 5, rates of protection during the base period were indeed very high, for sugar above 200 per cent of the base period world price. This has resulted thus in the high initial tariffs for sugar.

62. The absolute size of tariffs on raw sugar imports which will still be in place, when all UR Agreement reforms are implemented, is large in comparison with average world prices of around US 12 cts/lb in 1994 and they will remain to be a serious constraint on trade. Trade barriers in major importers will be higher than the free market value of the sugar itself. By 2000, the United States second tier tariff rate will be still over US 15 cts/lb, the tariff on raw sugar imports into the EC will be about US 18 cts/lb, and the Japanese tariff on raw sugar will be around US 29 cts/lb.

63. For selected sugar-containing products, the United States will convert Section 22 quotas to tariff-rate quotas approximately equivalent to current quotas (the estimated sugar content of these selected products, largely imported from Canada, totalled 196,000 tonnes in 1993). A number of other countries, Japan, the Philippines and Thailand, will also reduce tariffs on particular sugar-containing products by about one-third.

64. On the basis of the analysis of tariffs for raw sugar of 41 countries (see Annex V and VI) for which the 1993, 1995 and 2000 (2004) ad valorem tariffs are available, some inferences can

Box 3

The United States (US) and the Uruguay Round

1. The United States will bind tariff-rate import quotas at 1,139 million metric tonnes raw value (1,256 million short tonnes), 22,000 tonnes refined sugar and 1,117.2 million tonnes raw sugar. These quota levels are similar to those under current United States legislation and below baseline projections of USA import requirements. The current low duty of US$ 0.625 cents/lb, raw value will continue to apply to quota imports.

2. The US will progressively reduce the high tariff on over-quota raw sugar by 15% from a base rate of US 17 cts/lb over the period 1995-2000. The reduction will be of around US 0.46 cents each year, until tariff reaches US 15.36 cents/lb in the year 2000. US sugar production arrangements will stay virtually intact, and the internal sugar price is likely to remain unchanged at around US 22 cents/lb. Therefore, the world sugar price will have to fall below US 6 cents/lb before sugar exporters would consider exporting over-quota sugar to the US market, given transportation cost of US 1.5 cents/lb.

3. The commitment to reduce aggregate agricultural domestic support by 20% is not likely to lead to any changes to existing domestic support measures, because it had already been reduced by the required percentage from the base period of 1986-88 to 1994.

4. As a conclusion, it can be said that of the three areas of reform, only tariff reduction will affect US sugar policies and still the tariff of US 15.36 cents/lb US raw sugar market.

Source : United States Department of Agriculture (USDA), March 1994, UNCTAD country notes, Part IV of schedules of concessions annexed to the Marrakesh Protocol of April 1994.

be drawn. Arithmetic averages on bound maximum ad valorem tariff equivalents for raw sugar in 1995 will be about 114 per cent or about 61 per cent higher than the applied duty level of 1993 which was 53 per cent. This increase is a result of the tariffication process. By the year 2000 (2004), the arithmetic averages on ad valorem equivalents for raw sugar will be about 93 per cent, 21 per cent lower than in 1995.

65. The weighted average base tariff as calculated by the International Sugar Organization[11] is 116 per cent. The high tariff is due mainly to the fact that, 41 developing and less developed countries consolidated their tariffs at a bound maximum rate, the weighted average of which is 145 per cent. By the year 2000 (2004), the weighted average tariff for raw sugar , will be 97 per cent, 19 per cent lower than the base tariff. This is due mainly to reduction in the base tariffs of developed countries, from a weighted average of 148 per cent to 122 per cent in year 2000. The efforts of developing countries and least developed countries (LDCs) should also be taken into consideration (with the exception of countries which consolidated their tariffs at a maximum rate). These countries will reduce their weighted average from 67 per cent in 1995 to 51 per cent in 2004.

Table 5

EC TARIFF EQUIVALENTS
(ECU/tonne)

	Tariff equivalent		as % of external price	% of reduction
	1995	2000		
Sugar-raw	424	339	240.9 %	20 %
Sugar-white	524	419	267.3 %	20 %

Source: The Uruguay Round Agreement on Agriculture: An Evaluation, the International Agricultural Trade Research Consortium, July 1994.

66. A total of 78 countries consolidated white and raw sugar tariffs at a single level, including the 41 countries which consolidated at maximum rates. Of the remaining seven countries, three displayed minimal difference between both tariffs (United States, Canada and Norway), three countries (Japan, Republic of Korea and EC) consolidated higher tariffs for white sugar than for raw sugar and two countries (Malaysia and Sweden) consolidated lower tariffs for white sugar than for raw sugar.

67. Sugar tariffs of major white sugar exporters and importers are shown in Annex VII and VIII. As concerns the exporters, Brazil has offered the same reduction as for raw sugar. The EC variable level for white sugar was converted into a fixed rate tariff of ECU 524/tonne or about US cts 32/lb, which will be reduced by 20 per cent, which means that the tariff would be ECU 419/tonne or about US cts 26/lb by 2000. As concerns importers, the large ones like Kenya, Islamic Republic of Iran, Nigeria and Pakistan consolidated tariffs at maximum rates.

68. The United States tariff for white sugar imports will be reduced by 15 per cent to US $ 357.4/TM (US cts 16.25/lb) by 2000. The Section 22 import fee of 1 per cent on imports of refined sugar will be combined into the over-quota tariff and reduced 15 per cent by 2000.

69. The absolute size of tariffs on white sugar imports which will still be in place when all UR Agreement reforms are implemented is large in comparison with average world prices of

[11] All weighted averages are taken from document MECAS(95)9 of 8 May 1995 of the International Sugar Organization.

around US cts 14/lb in 1994. Trade barriers in major importers will be higher than the value of the sugar. By 2000, the United States second tier tariff rate will be still over US cts 16/lb, the tariff on white sugar imports into the European Communities will be over US cts 25/lb.

70. On the basis of the analysis of 45 countries for which we have applied tariffs 1993, 1995 and 2000 (2004) ad valorem tariffs for white sugar, some remarks can be done. The 1993 arithmetic average on applied ad valorem tariff equivalents is about 49 per cent, lower by more than 66 per cent than the ad valorem equivalent of the ceiling binding tariff in 1995 of 115 percent. Nevertheless, we can notice a decrease of 21 per cent between 1995 and 2000 (2004) arithmetic average tariffs, as a result of UR commitments.

Table 6

TARIFFS FOR SUGAR
(ad valorem tariff equivalents)

	1993		1995		2000(2004)	
	Raw Sugar	White Sugar	Raw Sugar	White Sugar	Raw Sugar	White Sugar
Arithmetic averages for 45 countries	53	49	114	115	93	94
Weighted averages	116*	55*			97	81

Sources: GATT 1994 Agreement, ISO Mecas (95) 9.

Notes: * For the purpose of comparison, arithmetic averages are calculated for the 45 countries for which information is available in the 3 years.
* Weighted averages in 1993 referred to base period 1986-1988.

71. For the period 2000 (2004), the weighted average tariff, will be 81 per cent, 32 per cent higher than the base tariff of 55 per cent. This is due mainly to the fact that the weight in white sugar world imports of countries which consolidated their tariff at a maximum level is so high[12] that this increase in tariffs is not compensated by the reduction in the base tariffs of other developing and developed countries.

[12] Of 41 countries, 32 were white sugar importers, accounting for 14 per cent of world total.

Figure 5

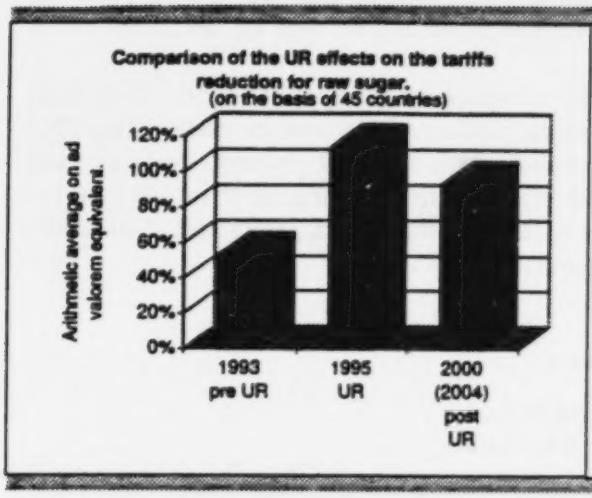
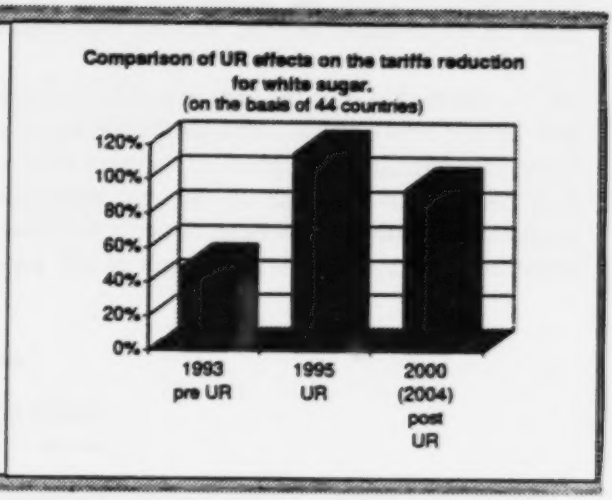


Figure 6



Source: GATT 1994 Agreement Country Schedules; UNCTAD's Trade Analysis and Information system.(Trains).

2.2. Minimum Access Commitments

72. Anticipating the high level of tariffs for products subject to the tariffication process, countries have agreed to maintain current access opportunities and to establish quantitative commitments for new access opportunities if imports in the 1986-88 base period were low or non-existent. The minimum access share for imported sugar will be 3 per cent of average annual domestic consumption during 1986-88 (to be increased to 5 per cent by the year 2000 for developed countries, and by the year 2004 for developing countries).

73. Twenty countries have included current and/or minimum access tariff quotas for sugar. (Barbados, Colombia, Costa Rica, Czech Republic, EC, El Salvador, Finland, Guatemala, Hungary, Iceland, Republic of Korea, Malaysia, Mexico, Morocco, Nicaragua, Norway, the Philippines, Poland, Slovak Republic, South Africa, Thailand, Tunisia, United States and Venezuela, see Annex X). Their import commitments amounts to 3.8 million tonnes, equal to about 14 per cent of world imports in 1993, which will rise by about 240,000 metric tonnes by 2004.

74. However, this already reflects current access levels and would not appear to create new market access opportunities: of the 3.8 million metric tonnes, 2.4 million are quotas already established; 1.5 million are imported by countries which are also net exporters; and the 1.1 million which corresponds to the United States quota may be reexported if needed to maintain the domestic supply-demand balance.

75. The developed countries access commitments represent the equivalent of about 2.5 million tonnes. In practice, the share of imports in consumption during 1990-93 in the EC, Japan and the United States was 17, 65 and 20 per cent respectively and total annual imports averaged about 5.8 million tonnes. United States and the EC were allowed to count special arrangements as part of their current access commitments and to allocate their minimum access quotas to individual countries. Consequently, import demand is not expected to increase specifically

because of the import commitments.

76. In the case of the United States, the access commitment only reflects the 1986-88 import levels, of an average of 1.139 million tonnes of sugar imports. Nevertheless, this commitment brings some predictability to import demand and greater security for refineries and for investment in refining. The EC will count imports under its preferential schemes against its current access commitments. During the period 1995-2000 the duty free access for ACP for 1,304,700 tonnes (white sugar equivalent) will continue.

77. Despite having no immediate consequences for access to their markets, the import commitments of both the United States (yearly quota of about 1.5 million metric tonnes of raw sugar) and the EC (yearly quota of about 1.3 million metric tonnes raw sugar) which cover about 10 per cent of world imports, put their trading systems on a more multilateral basis.

78. The schedules of the developing countries reveal that 19 countries made tariff quota commitments in the order of 1 million tonnes in total. Some of these countries are net exporters (Costa Rica, El Salvador) or both low-cost producers and next exporters (Colombia, Guatemala, Thailand). They consolidated tariffs at very high levels (more than 90 per cent, with the exception of Costa Rica).

79. The impact of this provision on individual countries will depend among other factors on the domestic production costs, the tariff rates and on the domestic sugar policy. In the Philippines, for example, a recent attempt by an industrial consumer to import sugar from an ASEAN country was frustrated by the producers lobby.

2.3 Special Safeguard Provisions

80. Special safeguards provision allows GATT members during the implementation period to impose additional duties on imports in the event of a major reduction in import prices, compared with the base period (1986/88) or a major surge in import volumes, compared with the recent three year average. Additional duties above the normal tariff rates can be imposed on any product which underwent tariffication, if either the price falls below a trigger price or a specific import volume limit is surpassed.

81. In the case of sugar, it is the import price condition which may have the greatest effect. The amount of the additional duty is determined according to the difference between the actual import price and a base reference price for imports in 1986-88. No additional duty can be charged unless the import price is more than 10 per cent below the reference price. The likelihood of this, will depend on the individual country's CIF reference price, but given the volatility of sugar prices, it would appear quite high.

3. Domestic Support

82. There will be no domestic support reduction commitments on sugar as such because, as a result of the November 1992 Blair House accord, these commitments are now on an agricultural sector-wide basis. The total **domestic support** given in 1986-88, measured by the Total

Aggregate of Support (AMS) which is the sum of commodity-specific AMS and sector-wide AMS, is to be reduced by 20 percent over 6 years. Support measures agreed upon as non-trade distorting are exempt from reduction. The list of these exempted or "Green Box" policies includes such policies as food aid, certain decoupled payments to producers, and general services to agriculture such as disease control, product inspection, research and extension. Permitted policies are exempt from countervailing duty actions and other GATT challenges (e.g. nullification and impairment actions, serious prejudice actions).

83. The agreement furthermore exempts direct payments that meet certain criteria from the reduction in total support for the 6-year implementation period. These criteria generally require that payments are made on a fixed quantity and on less than base period production. For example, USA deficiency payments would be exempt from reduction commitments.

84. Direct payments exempt from reduction and other internal supports subject to reduction would not be exempt from countervailing duty actions. However, they would be exempt from other GATT challenges provided support for a specific commodity did not increase from 1992 levels during the implementation period.

85. The general aim of the domestic support provision is to reduce support to high-cost producers. The likely impact on sugar trade and prices stemming from the commitment to reduce domestic support through the AMS is not yet entirely clear; however, taking into consideration that assistance to the sugar sector is mainly based on market price support, sugar could well be affected in a relatively strong way by this provision.

86. The AMS is not likely to reduce a number of other trade-distorting subsidies, such as on the costs of water and investment subsidies. Particularly in developing countries, such subsidies may well have a strong influence on sugar beet/cane production.

B. Sanitary and phytosanitary measures

87. The sanitary and phytosanitary agreement for the first time enables countries to use GATT rules to check the use of unjustified health-related regulations that restrict trade while assuring a country's right to protect food safety and animal and plant health. Under the agreement, sanitary and phytosanitary measures must be based on science. However, countries may maintain science-based standards that are stricter than international standards.

88. The impact of human health standards is less strong on trade in sugar than on trade in other sweeteners. As can be seen in table 5 high-intensity sweeteners[13] normally need government approval. This provision on sanitary and phytosanitary measures can be expected to contribute to harmonization in the international approval regulations for intense sweeteners.

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[13] For more information about alternative sweeteners, see The World Sugar Market, UNCTAD/COM/35, page 55.

Table 7

HEALTH REGULATIONS

Country	Products authorized
United States of America	Saccharin, aspartame, and acesulfame-K are currently approved, sucralose and cyclamate are under discussion, Alitame is awaiting FDA approval, and stevioside is forbidden.
European Communities	Concerning "high intensity sweeteners", the major problem is that the rules differ from country to country. Since 1988, the EC has tried to harmonize directives on sweeteners, particularly by introducing a list of intense sweeteners which should trade in the single market (acesulfame-K, aspartame, cyclamate, saccharin, thaumatin, neohesperidine DC). So far, however, different laws still prevail. For example, cyclamates are permitted for dietetic use in Denmark, Netherlands and Spain, but are forbidden in the United Kingdom, Belgium and France until the EC Scientific Committee for Food has completed tests re-affirming their safety.
Japan	Aspartame, glycyrrhizinate, saccharin, thaumatin, stevia sweeteners are currently approved.
Canada	Aspartame, saccharin and sucralose are currently approved; cyclamate is also authorized but with certain restrictions. Soft drink producers are not allowed to replace all the sugar in soft drinks by HFCS.
Australia	Aspartame, isomalt, sucrolose, alitame, glycerin, xilitol, hydrogenated glucose syrup, glycerin, mannitol, thaumatin, acesulfame-K, xylitol, saccharin, cyclamate and sorbitol are all approved.
Stevioside is only permitted for use in some countries in Asia and Latin America. Aspartame and acesulfame-K are approved in every Eastern European country except Albania.	

Source : The World Sugar Market, UNCTAD/COM/35

C. Special and differential treatment for developing countries

89. Developing countries are given special treatment. Least-developed countries are exempt from reduction commitments. Others have smaller reduction commitments, equal to two-thirds of the corresponding commitment for developed countries, and more time to implement them - 10 years instead of 6.

Chapter III

COMMITMENTS AND THEIR IMPLICATIONS FOR THE INTERNATIONAL SUGAR ECONOMY

A. Effects on prices

90. UNCTAD's Agricultural Trade Policy Simulation Model (ATPSM) - which is a global partial equilibrium model incorporating a wealth of detail (covering 148 countries and 18 specific agricultural commodities and groups) - contains a special sub-model for sugar because of the importance of preferential arrangements in sugar trade. Using this model, UNCTAD has estimated that as a result of the UR the world price of raw sugar would rise by 10 per cent once the transitional period has finished (by 2000), if there were no price response in developing country domestic markets, and by just under 5 per cent in the (more likely) case of price response.[14]

91. Figures from a model prepared by the Crops and Livestock Economics Branch of the ABARE show increases of world raw sugar and white sugar prices of 5.3 and 4.7 respectively from the baseline until 2000. Its model covers the UR's major possible changes concerning sugar, including reduction of the EC subsidized exports and internal sugar price, reduction of South African subsidized exports, reduction of Japanese import duties and increased world income; however this work was done before the final agreement and is therefore subject to revision.[15] Through yet another model, the USDA projected the world sugar price to increase 2-5 per cent above baseline projections by 2000 and 4-8 per cent by 2005; like the ABARE projections, however this work (which antedates the actual conclusion of the UR) is subject to revision.[16]

92. The size of price increases is small in all three models, and even in the most optimistic scenario of all, the impact on world prices would be moderated by the supply response in low-cost exporting countries.

93. The increase in prices is expected to be more significant for white than for raw sugar because of two main factors. The first factor is not linked to the UR agreement and is the shift in import demand from raw to white sugar. White sugar accounted for almost 40 per cent of total world sugar trade in 1992, against 35 per cent in 1990, and around 30 per cent at the beginning of the 1980s. The shift in import demand from raw to white sugar is linked, on the one hand, to the shift in import demand towards developing countries which do not have the necessary refinery facilities and, on the other hand, to the sharp decline in raw sugar imports by the United States.

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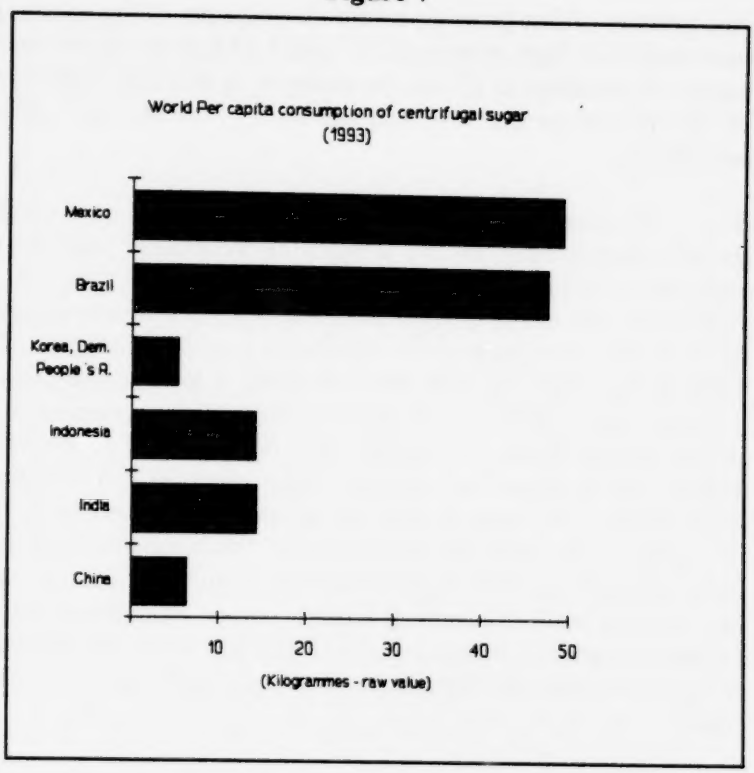
[14] Report on Evaluating the Outcome of the Uruguay Round Agricultural Agreement using the Agricultural Trade Policy Simulation Model (revised), UNCTAD February 1995.

[15] ABARE, International Sugar Organization, Workshop on the effect of UR Round on Sugar, USDA May 1993.

[16] Effects on the UR on United States Agricultural Commodities, Economic Research Service, USDA, March 1994.

Figure 7



94. This trend is expected to be reinforced in the 1990s with Russia shifting its import demand to white sugar. The reason for this is that most of the FSU'S raw sugar refining capacity was located in the Ukraine, while most of the demand for refined sugar is in Russia. In Asia as well, the demand for white sugar is increasing. One reason for this is that distribution networks have improved considerably. This has reduced the relatively high transport risks for white sugar. For many years the transportation of large quantities of raw sugar in bulk carriers was the norm. In the last few years handling methods have become more sophisticated and costs have been sharply reduced, so that the movement of white sugar between regions and even over greater distances has become safer and financially viable.

95. The second factor is linked with the UR agreement as the EC has been the most consistent volume exporter of white sugar for many years, as mentioned earlier, and the UR commitments together with CAP reforms are likely to reduce the level of surplus (and hence of exports) of white sugar. This would have an impact, albeit not very substantial, on the raw/white sugar price differential. However, it is possible that the reduction in EC's subsidized A and B quota sugar exports will be offset by an increase in C quota exports, which could rise somewhat as they become marginally more profitable because of marginally higher world market prices. Consequently, it is likely that the real effect of this factor on white sugar price will be relatively limited.

B. Income growth

96. The most important impact of the UR will undoubtedly come rather from the *income* than the price side. Increased global income growth due to the UR will be the major factor boosting world demand. According to the USDA, the combined effects of the UR will increase world consumption and production by 1-2 per cent above baseline projections in 2000 and 2-4 per cent in 2004.

97. Trade liberalization would release import demand mainly in Asian countries, especially

in a number of fast-growing-countries where per capita consumption is below the world average and there is a high propensity to spend additional income on sugar consumption. Per capita sugar consumption in China, for example, is still one of the lowest in the world, only one-third the world average and less than one-sixth of the high per capita consumption levels of Mexico and Brazil.

98. The rate of consumption growth will depend on a number of factors, notably economic growth (particularly in the developing countries[17] and Eastern Europe), but also on the performance of alternative sweeteners. A FAO-ISO study on the prospects of the world sugar market for the 1990s predicts that, under a high income-growth assumption (which appears to be more and more unrealistic), the annual overall growth rate of sugar consumption in the period 1990 to 2000 will be 1.94 per cent; under a low income growth assumption the figure is only 1.32 per cent. While the market for alternative sweeteners is thought to be nearing saturation in the United States and Japan, there is substantial scope for further substitution of sugar in Europe and in higher-income developing countries if the relative prices of sugar and maize and other staples (the main source of alternative sweeteners) were conducive and regulations on alternative sweeteners are harmonized. While international trade in HFCS[18] is limited by its high transport cost and short storage life, a number of Asian countries are now producing it, as, on a smaller scale, are some in Eastern Europe. The development of a crystalline form of HFCS (which is currently being researched, but has so far not proved commercially be viable) would increase the scope for substitution, and could also reduce transport costs, facilitating international trade.

C. Effects on developing countries

99. Broadly, the GATT agreement is likely to contribute to a long term reduction of instability of sugar prices, and to a certain long-term stabilization, beneficial for both producers and consumers. Sugar price volatility has been larger than that for any other major commodity; (sugar price behaviour during the 1980s is shown in Figure 8). The instability index calculated as the average percentage deviation of prices from their exponential trend was 58 per cent in the 1970s and 52 per cent in the 1980s. This was double the figure for the whole group of foods (which was 29 and 21 percent in the respective years) and triple the figure for all commodities (which was 18.8 and 13 per cent in the respective years). Already, since 1990 with the reduction of sugar preferential trade (due mainly to the drop in Cuban preferential trade), the

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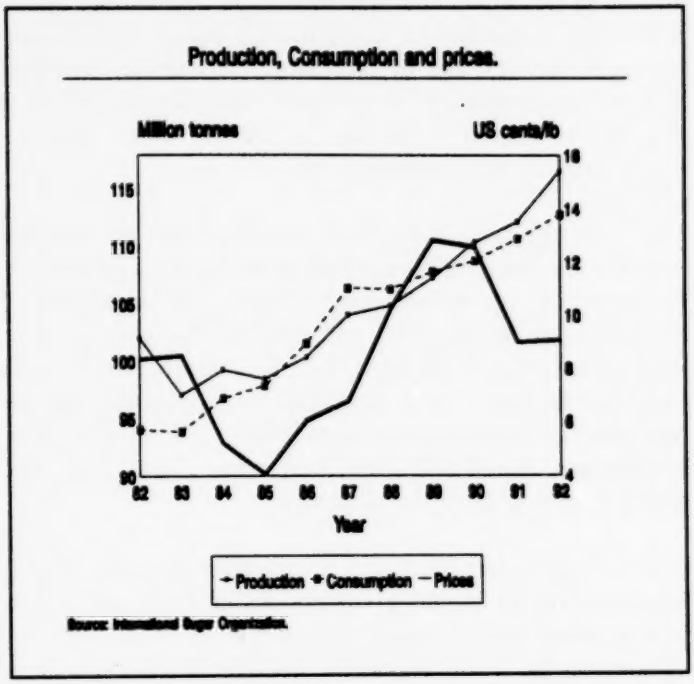
[17] Around 80-85 % of the total increase in sugar consumption over the last thirty years has been in the developing countries, where consumption has grown around 5-6 times as fast as in the developed countries (including Eastern Europe). (Estimated from The World Sugar Market UNCTAD, 1994, para. 13).

[18] HFCS, the most important caloric sweetener.- has made significant inroads, mainly in countries where domestic sugar prices are much higher than world prices. In 1990, an estimated 18 per cent of world sweetener consumption was in the form of alternative sweeteners, up from 6.6 per cent in 1982. With 11.1 per cent of world consumption, caloric sweeteners, mainly HFCS, followed by glucose, accounted for the major part; low -caloric (high-intensity) sweeteners such as saccharin and aspartame accounted for the remainder.

Figure 8



instability index has gone down, to 7.2 per cent in 1991-1993,[19] with world raw sugar prices remaining within a range of about 8-12 c/lb. However, it would be premature to conclude that the price will remain this stable over the long term.

100. There is likely to be a small, but positive long-term impact on the stability and functioning of the international sugar market as a result of the Uruguay Round. The Agreement will affect both the stagnant demand situation and the oversupply incentives. While the extent of the demand increase (due mainly to tariff reductions and general economic growth linked to GATT) is uncertain, the agreement should lessen oversupply pressures. Evidence of this is revealed in the GATT commitments, which show that a quarter of world exports had explicit export subsidies during 1986-90.

101. Prospects for stability do not just reflect the improved prospects of supply and demand balance, but also the improvements in the framework within which this balance is developed. The nature of trade barriers around the international market has changed fundamentally. These barriers are now more identifiable - a bound tariff is a more predictable and transparent trade barrier than a non-tariff-barrier import licence. Price transmission should be improved as ad valorem tariffs will apply to about 85 per cent of world production and 70 per cent of world consumption starting 1995, despite the high tariffs in some instances. In the past, international demand and thus the level of trade has been weakened by the policy practice of increasing import barriers when international prices rise. This practice brought additional production capacity into operation which was then retained due to the fact that the higher import barriers remained when international prices fell. This resulted in excessive world production capacity which handicapped price determination in the international market. In future, when prices rise on the international market, the existence of *ad valorem* tariffs, which could only be raised in limited and temporary circumstances, should provide a better link to the international market so that demand will be cut back. The more direct link between international and domestic prices should reduce international price instability as producers and consumers will have increased opportunities to respond to price changes.

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[19] This calculation is based on the following formula: $1/N \sum [(|Y-Yt|)/Yt]t=1$, where Yt is the observed magnitude of the variable; Y-Yt is the magnitude estimated by fitting an exponential trend to the observed value and N is the number of observations. The vertical bar indicates the absolute value (i.e. disregarding signs). See UNCTAD, Commodity Yearbook, 1991-1994.

102. In principle, the Agreement on Agriculture should also help to increase the level and reduce the instability of world market prices, by reducing the distortions in the market induced by sugar policies, and by increasing the linkages between the major developed country markets and the world market. In practice, however, this effect is likely to be limited (the reasons for this limited impact in the case of the EC, whose policies have had the greatest impact on the world market, as discussed in box 2).

103. At the same time, these countries will be exposed more to market forces which in turn will require more efficiency both in the production process and in the use of marketing methods. Sugar producing developing countries, which depend on sugar as a main source of export revenues (see Annex XII), will evidently benefit because they have, until now, been confronted with competition from subsidized beet production. Among major developing country exporters (see Annex XIII), it is clear that the low-cost sugar producers[20] will tend to benefit most. Moreover, developing countries which sell sugar mainly on the world market, like Thailand, Philippines, Brazil and in the longer run Cuba[21], will gain from the potential increase in world prices resulting from the agreement.

104. Trade liberalization has potential negative effects for net sugar-importing developing countries which would evidently suffer from any sugar price increases resulting from trade liberalization which would increase the cost of their imports (see Annex XIV). They have dominated the world import market over the last two decades. Currently they account for about 65 per cent of world free market net imports. They are predominantly white sugar importers, accounting in 1992 for 78 per cent of gross world white sugar imports which in turn amounts to 61 per cent of developing countries total gross sugar imports. There is a very strong relationship between imports by low income developing countries and the sugar prices. Indeed, it may be recalled that volatile sugar prices have made importing developing countries reluctant to meet an increasing share of rising consumer demand thoroughly imports, for fear of having to spend significantly more hard currency on imports, should there be another price rise.

105. This effect was anticipated in the negotiations, however, and the UR Ministerial Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least-Developed and Net Food-importing Developing Countries was adopted precisely to moderate the impact of the GATT agreement for the poorest countries; it contains commitments on maintaining adequate levels of food aid and preferential treatment in relation to agricultural export credits[22].

106. Countries currently enjoying preferential access to developed country markets are likely to see their preferences erode. In the case of the United States' sugar regime, even the minimum 15 per cent tariff reduction will reduce the advantages of beneficiaries of United States quotas. United States import quotas have already decreased by 50 per cent in the last decade and NAFTA

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[20] Lowest-cost producers in relative ranking, and approximate index of costs are Zimbabwe (cheapest: 100); Malawi (103); Chile (112); Zambia (116); Swaziland (119); Colombia (121); Thailand (122); South Africa (123); Kenya (124); Australia (126).

[21] The loss of its preferential access to Eastern Europe and the former USSR has had serious implications for the Cuban sugar industry, leading to a decline in production and foreign exchange earnings from sugar.

[22] Final Act of the Uruguay Round, April 1994.

is expected to create a new challenge for quota beneficiaries other than Mexico, if the latter becomes a net sugar exporter. Indeed, Mexico has commercially the potential to replace partially Caribbean imports if production can be sufficiently expanded, since under NAFTA Mexican sugar enters the US duty-free (up to certain limits). For more information about NAFTA, see Box 4.

107. Preferential exports to the EC are of particular importance to the relatively high-cost producers in the Caribbean, which would be uncompetitive in the world sugar free market. Jamaica and Guyana's sugar industries are in a better position with production costs at about 17-20 cts/lb at present, which is expected to fall to about 14 cts/lb over the next 6-8 years. Trinidad and Tobago is in a much weaker position, with production costs projected to fall to about 22.5 cts/lb in 1997. Even in the most optimistic scenario for world prices, the industry will not be viable in 2000 without further cost reduction.

Box 4

North American Free Trade Agreement (NAFTA)

Under the NAFTA agreement, during the first six years of the agreement, if Mexico becomes a "net surplus producer" -domestic sugar production exceeds domestic consumption -all the net surplus can be exported to the USA market at a zero tariff, up to a maximum of 25,000 metric tonnes, raw value. If Mexico is not a net surplus producer, it will still have duty-free access for 7,258 or the "minimum boat load" amount authorized under the USA tariff-rate quota. In years 7 through 14, the maximum will increase to 250,000 tonnes.

Expectations are that Mexico has the capability of becoming a net sugar producer. If it is so, by 2000, Mexico will be exporting to the USA 250,000 metric tonnes of sugar or about 15% of USA global sugar quota.

Source : UNCTAD, Database; USDA, 1994

108. In the longer run, reduction of the EC sugar support level is expected - the minimum seems to be around 5 per cent expressed in white sugar prices.[23] This would have a significant impact on the ACP countries cane sugar producers, reducing their export revenues about proportionally, as their export price for sugar to the EC is linked to the latter's intervention price for beetsugar. As the EC accounts for more than half of sugar exports of most ACP States, the consequence is that any cut in domestic sugar prices by the EC will lead to a substantial reduction in ACP sugar export revenues (see Annex XI).

109. Sugar is the backbone of the economies of most ACP countries. It is a significant employer of labour and a principal agricultural crop. The total number of persons directly employed in the sugar industries in ACP countries is more than a quarter of a million and in certain countries it represents 80-85 per cent of total agricultural employment. Furthermore, sugar cane cultivation occupies more than one fifth of arable land in most ACP countries, and more than half in many. For this reason, already in 1991, before conclusion of the UR, the European Community decided to pay 30 million ECUS to compensate ACP producers for potential losses.

D. Other implications

110. The production cost of HFCS, a major substitute for sugar, is expected to increase marginally because of higher maize prices. However, prices are also projected to rise for the

[23] Various estimates have indicated a reduction of 5 to 15 percent, including ED&F Man which considered 11 per cent reasonable, Agra Europe 1994, 10 to 12 percent and Tangermann, 1994, 15 percent.

major by-products of HFCS production, including maize gluten feed and maize oil, largely offsetting higher maize prices. The USDA estimates that the UR will have little effect on the competitiveness of HFCS with sugar. However, it would appear useful to undertake further research in this area.

Chapter IV

POLICY OPTIONS

111. Following market-oriented policy reforms in many sugar-producing developing countries and the end of Cuban preferential trade with the former Soviet Union, domestic protection regimes and obstacles to market access in developed countries remain as the major factor affecting in a negative way the good functioning of the international sugar market. The UR agreement, together with the reforms of the Common Agricultural Policy of the EC, will result in a liberalization of sugar production and trade which would lead to an increase in international prices.

112. This process of liberalization, which will continue after the implementation period of the UR Agreement, is likely to lead to higher and more stable international sugar prices, benefitting sugar producers who depend on sugar as a main source of export revenues. The challenges for international cooperation in this area are to find alternative policy instruments to achieve the desired protection objectives in the major developed countries without interfering with the price mechanism in the sugar market, or closing off these markets to developing countries' exports; and to find ways to facilitate the adjustment sugar economies in developing countries sugar producers to the new environment. Some of the possible responses are: improvements in efficiency; diversification through better use of sugar cane and sugar beet-by product; as well as through adding value to sugar; and improvement of the functioning of sugar markets.

A. Improvements in efficiency

113. In order to meet the demands of the changed market structure, and especially because price transmission to consumers will be direct and no longer distorted, improvements in the efficiency of sugar production will be necessary. In many producing countries, the real costs of producing sugar are higher than world prices. This is true not only for developed countries, but also for a number of developing countries. In this latter, a large percentage of cane mills are more than 20 years old and process efficiency is low by virtue of obsolescence and a design bias in favour of throughput, not quality. Inadequate capital and poor management have also been factors contributing to this poor performance. Producers which have maintained or improved their competitive position in sugar production have done so, at least in part, through technological innovation in both production and processing.

B. Better use of sugar cane and sugar beet by-products

114. Many sugar producing and exporting countries, concerned about the risk of sugar market imbalances and dependency on often depressed and highly volatile world market prices, have sought ways to better add value to their sugar crop by vertical diversification. Even today, there is still a big potential for improvement in this area.

115. Vertical diversification in the sugar industry can be achieved through intensified use of

by-products and through production of alternative products which can substitute imports and increase exports and thus have a positive effect on the balance-of-payments of a country.

116. Trade in by-products will probably not have a significant impact on the supply-demand balance in the near future. However, in an integrated approach to vertical diversification, an agro-industrial complex in developing countries could eventually be envisaged, where by-products would be used as inputs for the domestic industry. For example, bagasse could be used (and partly already is) to produce animal feed, enriched with by-products from some of the molasses. Industrial alcohol produced from the remaining molasses could be used in the chemical industry. Other potentially important options under investigation include biodegradable detergents, methane produced from cane-tops, and high-value amino acids.

117. As bagasse-based products have difficulty in penetrating highly competitive international markets, it would appear that their use in the manufacture of paper, pulp and board would mainly be to supply domestic markets, replacing imports. In view of the rapidly rising demand for paper and paper products in developing countries, and considering the balance-of-payment problems suffered by many of them, this import-substituting role may be important.

118. Although the experience of Brazil's Alcohol Programme is not clearly favourable under some conditions, programmes to produce anhydrous ethanol fuel for mixing with gasoline might be viable in oil-importing developing countries, particularly land-locked countries and regions with high oil transport costs. The main ancillary conditions for this option are high import costs of alternative fuels, availability of good quality arable land for sugar-cane production, climatic conditions favourable to the development of biomass and the existence of unemployed/under-employed, unskilled or semi-skilled labour. Ethanol production is an alternative for avoiding dependency on the world sugar market and has other advantages such as environmental and employment benefits.

119. These first two strategies would be consistent with both the objectives of the 1992 International Sugar Agreement and the Common Fund for Commodities (CFC) second account objectives -namely to "improve the productivity of sugar production by lowering the cost of production, to make sugar less dependent on the world market price by means of *vertical diversification* and in general the more efficient use of the raw materials and by-products of sugar production".[24] Improving productivity and vertical diversification are specifically mentioned in the CFC agreement in relation to lending from the second account.

C. Adding value to sugar

120. Examples of adding value to sugar are the extension of the process from raw sugar to white sugar and the production of higher value specialty sugar for the health food market.

121. The share of white sugar in international trade has been increasing steadily over recent decades, a trend likely to continue as the processing margins are squeezed for free-standing refineries using imported raws. White sugar accounted for 47 per cent of total world sugar trade

[24] International Sugar Agreement 1992.

in 1992, against 40 per cent in 1991, and around 30 per cent at the beginning of the 1980s. In 1992, around 73 per cent of developing country exports were in the form of raw sugar; they were also predominantly white sugar importers, with white sugar accounting for more than 60 per cent of their imports.

122. There is great potential for traditional raw sugar exporters to increase value added by installing relatively cheap "white ends" on their mills to produced a white sugar of acceptable export quality or "special sugar" (such as Demerara and Golden Granulated). Specialty raws, such as Demerara, are enjoying a growth of demand in developed countries and -although they will continue to account for a small share of production and trade, and are likely, for example in the EC, to be limited by contractual obligations to European refiners- they can be a lucrative alternative for the individual enterprises that adopt this "niche" marketing strategy. One example of a group of enterprises which pursues this strategy is the Mauritius Sugar Syndicate.

123. Improvements in processing technology may have created scope for some substitution of white sugar imports by higher quality unrefined sugar from tropical sources; it is likely that these direct-consumption sugars will find their real potential in the domestic markets of larger cane producers and other lower income countries. Already, lower-quality whites are finding an easier market: African countries, which in the past insisted on EC No. 2 quality, now demand more low-quality white sugar, e.g. that produced from Brazil; the same is true in the case of North Africa, including Egypt, as well as Middle Eastern countries. Producers are already concentrating on the development of white end mills, often for the local or regional market.

D. Improvement in the functioning of sugar markets

124. An important task remaining for the international community even following the UR Agreement in Agriculture is to improve the functioning of the sugar markets, in particular with a view to stimulate a greater transparency of commodity exchanges. This would help to reduce the price volatility of sugar. Price volatility, as has been shown, makes prediction of export earnings from the sale of sugar very difficult for producing countries. Short-term manipulations by trading houses and investment funds and non-deliverability of sugar from the largest exporter in the hemisphere against the New York No 11 contract are two further issues calling for attention. These issues have already been discussed by an expert group under the auspices of UNCTAD but further efforts must be made to promote the establishment of a market which reflects the real situation of sugar supply and demand.

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ANNEX I

Summary of policies of major sugar exporters

Country or region	Price or production policies	Trade policies
European Union	Fixed prices to consumer and producer for quotas A and B. Production quotas by country and producer. Restrictions on substitutes.	Variable levies on imports. Variable subsidies on exports. Guaranteed imports of 1.4 million metric tonnes from African, Caribbean, and Pacific countries.
Australia	Fixed domestic prices until 1989, now prices follow the world market. Production quotas. Marketing regulation. In 1991, the Queensland Sugar Corporation replaced the Sugar Board	Pooled pricing of export and domestic sales by government board, with lower prices for exports. Ban on imports (ended 1 July 1989) replaced by fixed tariff.
South Africa	Industry-controlled price stabilization programme, High domestic prices	Sales by industry board, with lower prices for exports.
Brazil	Minimum producer prices. Regional production subsidies.	Government control of exports until 1989. Currently, exports are private, but subject to government license to assure adequate domestic supply.
Cote d'Ivoire	Restructuration plan including: -introduction of village plantations -improvement of factories & management domestic prices are determined by the Government.	Government control of exports through Sodesucre.
Thailand	High domestic prices, fixed by a government body.	System of export licenses
Philippines	Regulated producer, consumer prices.	Government control of quotas and the *quedan* system[1]. Until 1986, state controlled trading.
Dominican Republic	Government control of production and prices.	The majority of exports done by the State.
Cuba	Administered prices.	Government sales. Government control of milling.

[1] *Quedan* is a paper which indicates the quantity of sugar belonging to growers but stored in mills. It serves as a form of security essential for the planters' financing.

ANNEX II

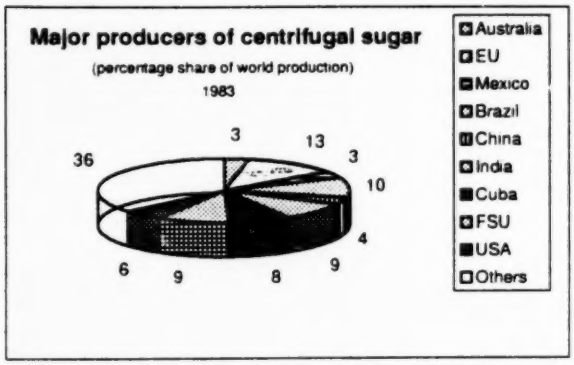
Summary of policies of major sugar importers

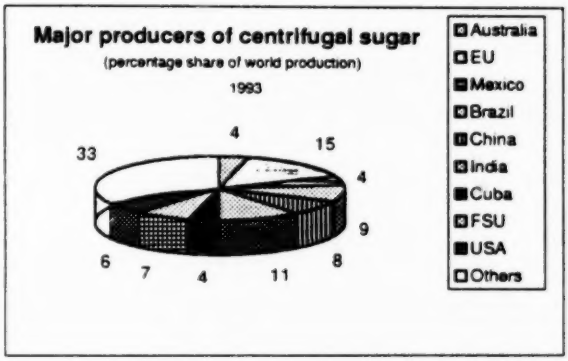
Country of region	Price or production policies	Trade policies
CIS	Government regulation of prices.	
United States	Price supports for beet and cane processors and growers.	Guaranteed import quotas, duties and fees.
Japan	Fixed producer/consumer prices. Taxes on HFCS production.	Tariffs, surcharges, and variable levies on imports. Long-term contracts for some imports.
China	Prices determined by Government. Since early 1992, a domestic parallel free market exists	Government purchases and sales through a variety of bodies.
India	Fixed producer price for cane for "levy sugar". Fixed consumer price on part of sales.	Association control of exports.
Canada	Government support for beet sugar.	None.
Indonesia	Sugar industry highly regulated. Prices are determined by the government.	Sugar millers sell 30% of their output for a low-government-price to BULOG (Bureau of Logistics). BULOG has an option on another 35% of millers output paid at the market price. The extra sugar can be exported by mills.
Nigeria	Guaranteed minimum prices for sugar cane. Subsidies for inputs, land preparation and haversting. The yearly fixing of a local price as a function of local production against world market imports. Tax relief for investors in medium and large scale plants.	Government control of imports.

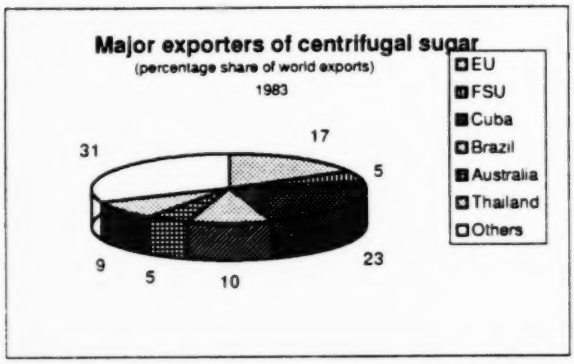
Source: UNCTAD country notes on sugar.

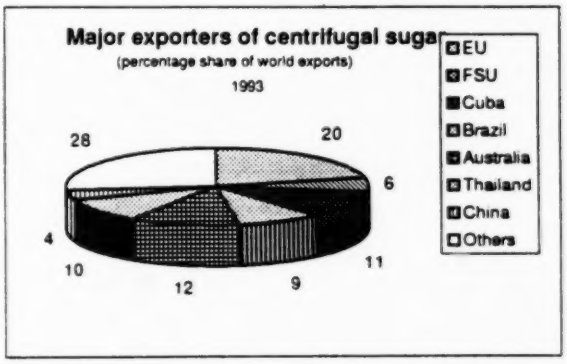
ANNEX III

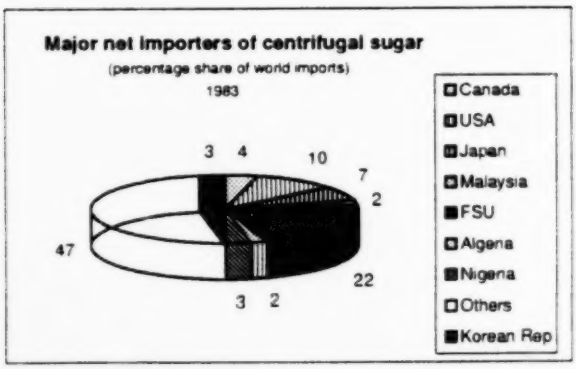
Major Actors, centrifugal Sugar (percentage share)

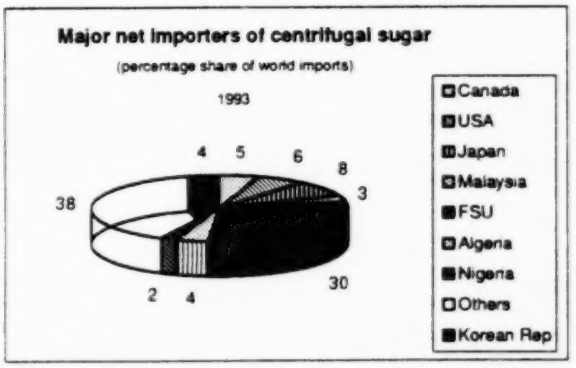


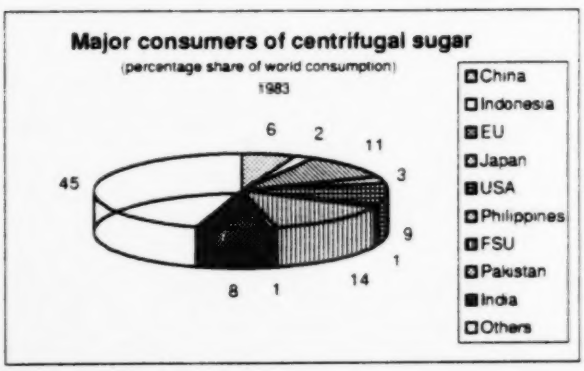


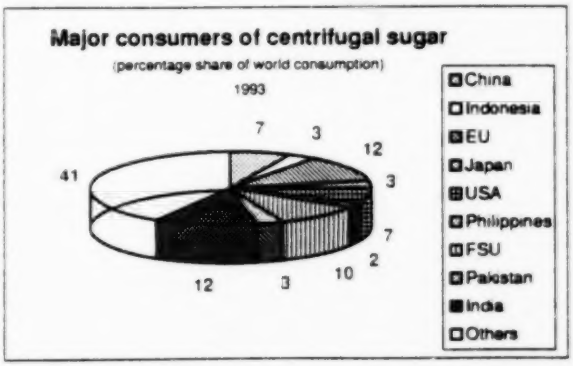












Source : ISO Sugar Yearbook 1994.

ANNEX IV

United States sugar import quotas 1994/1995
(Short tonnes raw value)

No.	Countries or Territories	Import quotas	Trade status
1	Argentina	59,088	GSP
2	Barbados	9,619	CBI
3	Bolivia	10,993	ANDEAN
4	Brazil	199,253	MFN
5	Colombia	32,980	ANDEAN
6	Costa Rica	20,612	CBI
7	Dominican Republic	241,852	CBI
8	Ecuador	15,116	GSP
9	El Salvador	35,728	CBI
10	Guatemala	65,959	CBI
11	Guyana	16,489	CBI
12	Haiti	9,334	CBI
13	Honduras	13,741	CBI
14	Jamaica	15,116	CBI
15	Mexico	9,334	NAFTA
16	Nicaragua	28,857	CBI
17	Panama	39,851	CBI
18	Peru	56,340	ANDEAN
19	Trinidad and Tobago	9,619	CBI
20	Uruguay	9,334	GSP
21	Australia	114,055	MFN
22	Belize	15,116	CBI
23	Canada	18,164	NAFTA
24	Congo	9,334	GSP
25	Cote d'Ivoire	9,334	GSP
26	Fiji	12,368	GSP
27	Philippines	185,511	GSP
28	Gabon	9,334	MFN
29	India	10,993	GSP
30	Malawi	13,741	GSP
31	Madagascar	9,334	GSP
32	Mauritius	16,489	GSP
33	Mozambique	17,864	GSP
34	Papua New Guinea	9,334	GSP
35	Paraguay	9,334	GSP
36	Swaziland	21,987	GSP
37	South Africa	31,605	GSP
38	Thailand	19,239	GSP
39	Taiwan province of China	16,491	MFN
40	Zimbabwe	16,491	GSP
	Total	1,465,333	

Source: USDA

1/ As of October 1, 1990, Canada is exempt from the tariff rate quota's second-tier duty and, therefore, faces no prohibitive duty limiting sugar shipments to the United States. Previously Canada had a 1.1 percent share of the quota.

ANNEX V

Exporters: Comparison between 1993 - 1995 and 2000 /2004 ad valorem tariff for raw sugar

COUNTRY	1993			1995				2000/2004		
	1993 ad valorem tariff on national unit	tariff usd/T	ad valorem equivalent (%)	1995 ad valorem tariff in (%) or national unit			ad valorem equivalent (%)	bound % rates national unit	tariff in usd/T	ad valorem equivalent (%)
				applied	base rate	bound				
*Antigua & Barbuda**	-	-	-	-		100	100	100	-	100
Argentina*	10	-	10	16		35	35	35		35
Australia	A$ 55/ T	37	17		140	A$128/T	40	A$70/T	47	22
Austria	AS 2000/ T	164	74			AS1021/T	38	AS867.9/T	71	32
Barbados	-	-	-	-		160	160	122	-	122
*Belize**	-	-	-	-	110	110	110	110	-	110
Bolivia	10	-	10	10	40	40	40		-	40
Brazil	20	-	20	16	55	55	55	35	-	35
China	30	-	30				100	-	-	76
China TW	25	-	25				-	-	-	-
Colombia	20	-	20	20		130	130	117	-	117
Congo	-	-	-	-		30	30	-	-	30
Cote d'Ivoire	-	-	-	-		15	15	15	-	15
Cuba						40	40	40	-	40
Czech Republic	73	-	73			70	70	60	-	60
*Dominican Rep**	-	-	-	-		40	40	40	-	40
Ecuador	17	-	17	20		20	20	20	-	20
El Salvador	-	-	-	-		92	92	70	-	70
EU	ECU424/T	495	221		ECU424/T	ECU410/T	213	ECU339/T	396	176
*Fiji**	-	-	-	-		40	40	40	-	40
*Gabon**	-	-	-	-		60	60	60	-	60
Guatemala	-	-	-			178	178	160	-	160
*Guyana**	-	-	-	-		100	100	100	-	100
*Jamaica**	-	-	-	-		100	100	100	-	100
*Honduras**	-	-	-	-		35	35	35	-	35
Hungary	80	-	80			80	80	68	-	68
India*	40	-	40		75	150	150	150	-	150
Madagascar	-	-	-	-		30	30	30	-	30
Mauritius	-	-	-			122(+17%)	122(+17%)	122(+17%)	-	122(+17%)
Nicaragua	-	-	-	-		120	120	100	-	100
*Paraguay**	-	-	-	-		35	35	35	-	35
Philippines	30	-	30			100	100	50	-	50
Poland	20	-	20			120	120	96	-	96
St Vincent & Gren.	-	-	-	-		170	170	130	-	130
South Africa	786R/T	231	103			124	124	105	-	105
Swaziland	-	-	-	-		124	124	105	-	105
Thailand	3500B/T	137	61			104	104	94	-	94
Trinidad*	45	-	45			100	100	100	-	100
Turkey	-	-	-	-		150	150	135	-	135
Ukraine										
Zambia	-	-	-	-		125	125	125	-	125
average in % 1			50				90			77
average in %			50				91			80

Sources: GATT Agreement, Country Schedules
Trade analysis and information system (TRAINS)

Notes:

* Developing countries or LDCs which consolidated at a maximum bound rate.
- Developed countries will reduce tariffs by 2000 and developing countries by 2004.
- Countries in bold are those for which the 1993, 1995 and 2000 (2004) arithmetic averages have been compared.
- To convert specific tariffs into dollar, the average rate of exchange against the dollar in 1993 as published by the IMF was used.
- To obtain the ad valorem tariffs, the average annual price of raw sugar (1993) as published in the 1993 ISO year book (220.89$/T) was used.

1 Only for countries information is available in the three years

ANNEX VI

Importers: Comparison between 1993-1995 and 2000 /2004 ad valorem tariff for raw sugar

COUNTRY OR TERRITORY	1993			1995				2000/2004		
	ad valorem tariff or national unit	Tariff in usd/T	ad valorem equivalent (%)	ad valorem tariff in (%) or in national unit			ad valorem equivalent (%)	bound % rates or national unit	Tariff in usd/T	ad valorem equivalent (%)
				applied	base rate	bound				
Algeria	3	-	3				-		-	-
*Bahrain**	-	-	-	-		35	35	35	-	35
Bangladesh*	100	-	100	60		200	200	200	-	200
*Brunei**	0	-	-			50	50	50	-	50
*Cameroon**	-	-	-	-		80	80	80		80
Canada	C$23/T	17.65	8		C$32/T	C$31.73/T	11	C$27.66/T	21	10
Cyprus	-	-	-	-		33	33	25	-	25
Egypt	-	-	-	5		30	30	20	-	20
Finland	Fm 5700/T	985	445			493	493	316	-	316
*Ghana**						99	99	99		99
Hong Kong	0	-	0			0	0	0	-	0
Indonesia	10	-	10	10		110	110	95	-	95
Iceland					350	350	350	175	-	175
Japan	yen 51500/T	460	205.6		yen84500/T	yen82383/T	328	yen71800/T	641.3	287
*Kenya**	-	-	-	-		100	100	100	-	100
Korea RP	9	-	9			23.7	23.7	18	-	18
*Kuwait**	-	-	-	-		100	100	100	-	100
Macao	-	-	-	-		0	0	0	-	0
Malaysia	0	-	10			17	17	15	-	15
Mexico	10	-	10	0	400	396	396	360	-	360
Morocco*	10	-	10			221	221	168	-	168
New Zealand	0	-	0			0	0	0	-	0
*Niger**	-	-	-	-		200	200	200	-	200
Nigeria*	50	-	50			150	150	150		150
Norway	NK 100/T	13.30	6		116	82	82	30	-	30
Pakistan*	90	-	90			150	150	150		150
Peru	15	-	15	20		130	130	68	-	68
Romania	-	-	-	-		200	200	180	-	180
Russia Fed.	0	-	0			-	-	-	-	-
Saudi Arabia	12	-	12			-	-			
*Senegal**	-	-	-	-		30	30	30	-	30
Singapore	0	-	0			27	27	10	-	10
Sri Lanka	RS 5000/T	100.8	45			66	66	50	-	50
*Suriname**	-	-	-	-		20	20	20	-	20
Sweden	0	-	0			132	132	112	-	112
Switzerland	SF 220/T	148	66		SF720/T	FS 702/T	211	SF 610/T	41.4	184
*Tanzania**	-	-	-	-		120	120	120	-	120
Tunisia*	15	-	15			190	190	100	-	100
Uganda*	-	-	15	-		80	80	80	-	80
USA	$ 192/T	192	85		$ 399/T	$389/T	172	$338.7/T	339	150
Uruguay	7	-	7	20		60	60	35	-	35
Venezuela	20	-	20	20		117	117	105	-	105
average in % 1			56				138			108
average in %			56				121.7			99

Sources : GATT 1994 Agreement - Country Schedules
Trade Analysis and Information System (TRAINS)

Notes :
* Developing countries or LDCs which consolidated at a maximum (bound) rate.
- Countries in bold are those for which the 1993, 1995 and 2000 (2004) arithmetic averages have been compared.
- Countries which will reduce their tariffs by 2004 are in italic.
- To convert the tariffs into dollars, the average rate of exchange against the dollar in 1993 as published by the IMF was used.
- To obtain the ad valorem tariffs, the average annual price of raw sugar as published in the 1993 ISO year book (220.89$/T) was used.
- Base rate refers to average of 1986-88
1 Only for countries information is available in the three years.

ANNEX VII

Exporters: Comparison between 1993 - 1995 and 2000/2004 ad valorem tariff for white sugar

EXPORTERS	1993			1995				2000/2004		
	ad valorem tariff in % or in national unit	tariff in usd/T	ad valorem equivalent (%)	base rate	ad valorem tariff in % or in national unit	tariff in usd/T	ad valorem equivalent in %	ad valorem tariff in % or national unit	tariff in usd/T	ad valorem equivalent %
Argentina*	10		10		35		35	35		35
Australia	$A 55/T	37 23	14	$A140/T	$A 138/T	87	32	$A 70/T	47	17
Austria	AS 2000/T	164 7	60		AS 1098/T	90 4	33	AS 933/T	77	28
Bolivia	10		10		40		40	40		40
Brazil	20		20		85		85	35		35
China	30		30		100		100	76		76
Colombia	20		20		130		130	117		117
Cuba*					40		40	40		40
Czech Rep	60		60		70		70	60		60
EU				ECU 524/T	ECU 507/T	848	309	ECU 419/T	702	256
Guatemala					178		178	160		160
Hungary	80		80		80		80	68		68
India*	60		60		150		150	150		150
Mauritius					122		122	122		122
Philippines	30		30		100		100	50		50
Poland					120		120	96		96
South Africa	84		84		124		124	105		105
Thailand	50				104		104	94		94
Trinidad*					100		100	100		100
average in %			40				102 7			87

Sources: GATT Agreement 1994 - Country Schedules
Trade analysis and information system (TRAINS)

Notes:

* Developing countries or LDCs which consolidated at a maximum bound rate.
- To convert specific tariff into dollar, the average rate of exchange against the dollar in 1993 as published by the IMF was used.
- To obtain the ad valorem tariffs, the average annual price of white sugar (274 $ /T) as published in the 1993 ISO year book was used.

ANNEX VIII

Importers : Comparison between 1993 - 1995 and 2000/2004 ad valorem tariff for white sugar

IMPORTERS	1993				1995			2000/2004		
	ad valorem tariff in % or national unit	tariff in usd/T	ad valorem equivalent (%)	base rate	ad valorem tariff in % or in national unit	tariff in usd/T	ad valorem equivalent	ad valorem tariff in % or national unit	tariff in usd/T	ad valorem equivalent
Algeria	15		15		-		-	-		
Bangladesh*	100		100		200		200	200		200
Brunei*	0		0		50		100	50		50
Canada	$C30.86/T	23	9	$C42/T	$C40.63/T	30.8	11.2	$C 35.42/T	26.75	10
Egypt	-				30		30	20		20
Finland	FM 5700 /T	985	360		361		361	231		231
Hong Kong	100		100		0		0	0		0
Indonesia	10		10		111		110	95		95
Japan	Yen 63500/T	568	207	Yen121300	Yen 118.367/T	1058	386.4	Yen 103.100/T	949.5	346
Korea Rep	11		11		94.6		94.6	85.1		85
Malaysia					5		5	5		5
Mexico	10	-	10	$M400	$M396/T	127.8	46.5	$M 360/T	116	42
Morocco	13		13		221		221	168		168
New Zealand	0		0		0		0	0		0
Nigeria*	50		50		150		150	150		150
Norway	NK 100/T	13	5	NK100/T	NK 88/T	11.7	4.3	NK 30/T	4	1.5
Pakistan*	90	-	90		150	-	150	150	-	150
Peru	15	-	15		130	-	130	68		68
Russia Fed	0	-	15		-	-	-	-	-	-
Saudi Arabia	6		6		-	-	-	-	-	-
Singapore	0		0		27	-	27	10	-	10
Sri Lanka*	5000RS/T	109	40		50		50	50		50
Sweden	0		0		K 2930/T	353	129	K 2490/T	300	109
Switzerland	SF220/T	149	54	SF720/T	SF 702/T	475	173.6	SF 610/T	412	150
Tunisia	27.5		28		190		190	100		100
USA	$194/T	194	71	421	$410/T		150	$357/T		130
Uruguay	14		14		60		60	35		35
Venezuela	30		30		117		117	105		105
average in %			57				126			100

Sources : GATT Agreement, Countries Schedules
Trade analysis and information system (TRAINS)

Notes : * Developing countries or LDCs which consolidated at a maximum bound rate.
- To convert specific tariffs into dollar, the average rate of exchange against the dollar in 1993 as published by the IMF was used.
- To obtain the ad valorem tariffs, the average annual price of white sugar (274 $ /T) as published in the 1993 ISO year book was used.

ANNEX IX

Classification of developing countries and territories according to their bound rates for raw sugar

BOUND RATE in %	COUNTRIES OR TERRITORIES
0 - 30	Congo*, Cote d' Ivoire*, Cyprus, Costa Rica, Egypt,(Republic of Korea), Macau, Myanmar*, Madagascar*, (Malaysia), Senegal*, Singapore, Suriname*.
30 - 100	Antigua & Barbuda*, Bahrain*, Benin*, Bolivia*, Brunei*, Cameroon*, Chile, Costa Rica, Cuba*, Dominican Republic*, El Salvador, Fiji*, Gabon*, Ghana, Guyana*, Honduras*, Hong Kong*, Indonesia, Israel, Jamaica*, Kenya*, Kuwait*, Mauritania*, Nicaragua*, Paraguay*, Peru, Philippines, Sri Lanka*, Thailand, Trinidad & Tobago*, Tunisia, Uganda*, Uruguay.
over 100	Bangladesh*, Barbados, Belize*, Colombia, Dominica*, Guatemala, India*, Malta*, Mauritius*, Mexico, Morocco, Namibia, Niger*, Nigeria*, Pakistan*, Rumania, Santa Lucia, South Africa, St Vincent and Grenadines, Swaziland, Tanzania, Zambia*, Zimbabwe*.

Sources : GATT Agreement 1994 - Country Schedules
*Developing Countries which consolidated at a maximum rate for raw & white sugar.
Countries in brakets are those for which the rate of raw sugar is different from white sugar.

ANNEX X

Commitments on Current and/or Minimum Access (Metric Tonnes)
1995-2000/2004

Country or group of countries	Initial Quota	Final Quota	Period
BARBADOS	1,454	2,423	1995/2004
COLOMBIA	33,860	157,364	na
COSTA RICA	4,618	7,699	1995/2004
EL SALVADOR	3,887	6,479	1995/2004
EC	1,304,700	1,304,700	1995/2000
FINLAND	85,806	85,806	na
GUATEMALA	8,620	14,367	na
HUNGARY	0	7,514	1995/2000
ICELAND	6,653	11,816	na
MALAYSIA	17,400	29,600	1995/2004
MEXICO	110,000	183,800	1995/2004
MOROCCO	274	274	1995/2004
NICARAGUA	26	44	1995/2004
PHILIPPINES	103,000	103,000	na
SLOVAK REPUBLIC	75	75	1995/2000
SOUTH AFRICA	46,667	62,037	1995/2000
THAILAND	13,105	13,760	1995/2004
TUNISIA	100,000	100,000	1995/2004
USA	1,139,195	1,139,195	na
VENEZUELA	132,013	132,103	1995/2004
TOTAL	3,111,353	3,361,966	1995/2004

Source: Uruguay Round of Multilateral Trade Negotiations.
Legal instruments embodying the results of the Uruguay Round of Multilateral Trade Negotiations done at Marrakesh on 15 April 1994.

Note: Some figures have been arrounded to standarize the data.

ANNEX XI

Percentage of ACP sugar exports to the European Union in 1993

(tonnes raw value)

ACP Countries	Total exports	Exports to EU	Percentage of EU exports in total exports	Memo item Imports of white sugar
Barbados	48,000	48,669	101% #	12,000
Belize	95,942	44,777	47%	-
Congo	17,541	16,273	93%	5,976
Cote d'Ivoire	28,000	22,465	80%	27,000
Fiji	410,246	200,140	49%	1,570
Guyana	244,175	177,542	73%	3,227*
India	352,600	22,252	6%	-
Jamaica	152,509	132,102	86%	51,758
Kenya	0	0	-	69,000
Madagascar	12,424	12,893	103% #	1,098
Malawi	26,636	19,600	74%	-
Mauritius	575,460	458,542	80%	-
St. Kitts and Nevis	22,000	21,564	98%	-
Swaziland	363,281	179,861	50%	-
Tanzania	11,000	11,058	100% #	8,000
Trinidad and Tobago	53,024	41,358	77%	7,707
Zimbabwe	33,489	33,489	100% #	-

Source ISO sugar year book 1994

\# Due to differences in timing between exports and imports, the total exports of a country may be lower than the declared imports from that country into the EU during the same period

ANNEX XII

Share of sugar products in selected developing countries' total exports
(% of nominal US dollar values)

	1967-71	1979-81	1987-89	1991-93
1. Cuba	76	81	71	69
2. Fiji	56	54	41	40
3. St Kitts and Nevis	NA	55	40	
4. Mauritius	88	63	35	28
5. Guyana	27	31	33	36
6. Belize	NA	36	31	39
7. Dominican Rep.	51	33	17	24
8. Barbados	41	19	16	
9. Malawi	0	17	10	6
10. Jamaica	14	6	9	9
11. Guatemala	4	5	7	12
12. Mozambique	12	NA	5	4
13. Trinidad Tobago	5	1	2	2
14. Panama	5	15	NA	5

Source: UNCTAD secretariat estimates

ANNEX XIII

Developing Country Total Net Exports to the free market 1992, 1993
(thousand metric tonnes raw value)

		Net exports		Exports of white sugar	
		1992	1993	1992	1993
1.	Thailand	3,719	2,401	1,297	583
2.	Brazil	2,273	3,008	1,592	2,281
3.	Cuba	1,755	901	225	43
4.	Guatemala	721	721	199	224
5.	India	539	331	549	353
6.	Colombia	515	658	299	276
7.	Dominican Republic	301	305	78	0
8.	Swaziland	229	241	not listed	not listed
9.	Philippines	213	338	not listed	not listed
10.	Argentina	184	51	41	51
11.	Fiji	169	230	not listed	not listed
12.	Mauritius	73	38	not listed	not listed
13.	Guyana	30	66	not listed	not listed

Source: ISO Sugar Yearbook 1994

ANNEX XIV

Free market net imports by selected developing countries 1992, 1993
(thousand metric tonnes raw value)

		Net imports		Gross Imports of white sugar	
		1992	1993	1992	1993
1.	Korea, Rep. of	860	941	100	87
2.	Nigeria	697	551	697	551
3.	Islamic Rep. of Iran	661	500	736	470
4.	Malaysia	643	723	0	0
5.	Algeria	638	839	427	712
6.	Saudi Arabia	521	490	521	490
7.	Egypt	465	504	300	840
8.	Iraq	439	330	439	330
9.	Indonesia	425	263	375	263
10.	Syrian Arab Rep.	372	263	267	222
11.	Yemen	320	260	355	297
12.	Morocco	302	298	0	0
13.	Tunisia	240	207	163	152
14.	Singapore	222	210	85	126
15.	Jordan	237	117	472	317
16.	Venezuela	201	203	32	24
17.	Peru	162	271	93	307
18.	Pakistan	85	29	105	49
19.	Mexico	160	75	102	68
20.	Libyan Arab Jamah.	154	188	154	188
21.	Lebanon	89	102	71	80
22.	Chile	89	19	89	19
23.	Sri Lanka	57	368	366	394

Source: ISO Sugar Yearbook 1994